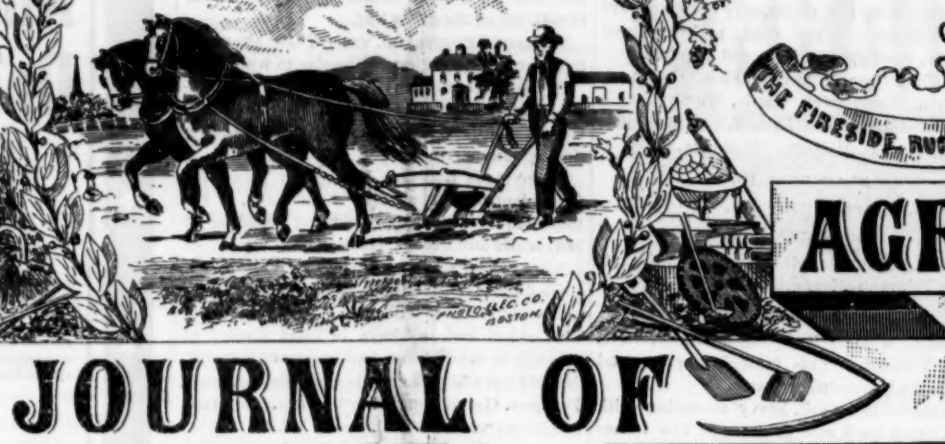


# MASSACHUSETTS PLOUGHMAN



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**LINUS DARLING,**  
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Correspondence from particular farmers, giving the results of their experience, is solicited. Letters should be signed with the writer's real name, in full, which will be printed or not, at the writer's wish.  
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**Rates of Advertising:**  
12 1-2 cents per line for first insertion.  
8 1-4 cents for each subsequent insertion.

### AGRICULTURAL.

#### Balanced Rations for Plants.

There has been so much written in the rural papers about balanced rations for farm animals, that we ought to be beginning to know considerable about what and how to feed them; but there is less known about balanced rations for plants. It is as much to the advantage of the farmer to know what are the requirements of his crops, and how to supply them, as to know how to feed his animals. Perhaps we can learn something from nature's requirements and treatment of plant life.

All observing persons have noticed how different plants and trees are suited to different soils and conditions, and how individuals of the same species are seen to vary in size, vigor and fruitfulness in different soils. It is commonly known that a pine forest will flourish in soil that will scarcely grow an oak, maple and many other kinds of trees, although the same climate may be suitable to them, and the other trees mentioned may grow well on a different soil a short distance from the pine lands. In some parts of the country, after the pine is cut off, there comes up a growth of oak and other deciduous trees, but they all make a feeble, stunted growth, except the softer woods like aspen and cottonwood, which grow quite well. In some parts pine succeeds pine naturally. The question of importance to us is: Why does one class of trees flourish where the other does not?

It we should burn the wood of the two kinds separately and have the ashes analyzed, we would at once see that the pine and other soft wood ashes contained very much less of phosphoric acid and potash than the hard wood ashes. Every one who has leached ashes for soap making knows this from experience; at least, they know that it is almost useless to try to get strong lye from ashes made from pine and other similar woods. The fact is, these soft-wooded, quick-growing kinds of trees, and especially the pine, require very little of these manurial elements in their growth. Where one will flourish the others will nearly or entirely starve to death. The difference is in the food requirements. A cow will subsist on grass, but a lion must have flesh. Each plant, whether large or small, and each animal must have its proper food.

There are also differences in the ability of certain plants to dissolve and appropriate the latent fertility in the soil. Some soils may have an abundance of plant food in them, but very often nearly all of it is so locked up in combination with other minerals that very few plants can get it. However, there are some plants that digest these crude materials, and subsist upon them very much more easily than others. Rye, tritrap, buckwheat and cow peas are of this character. They are like the goat and the donkey among animals, which can get a living upon brush and weeds that a cow or a horse would not

eat and could not digest. Once the crude inorganic fertility of the soil is changed into organic form by these sturdy plants, the latter can be plowed under or fed to stock and the manure returned to the soil and thus easily appropriated by crops of a higher order. It is like iron that has been extracted from the original ore, which can then be easily melted over and over again into different and more useful forms. Therefore we should understand as nearly as is possible just what crops will grow on the different soils as we find them, and what to add in the way of plant food to make the crops grow to the best advantage.

Perhaps all farmers do not know which are the elements that constitute plant foods. Scientists say that of the seventy-three elements of nature, as many as thirteen are necessary to plants during the period of their growth. Lime, iron, silicon and sodium are among the number, and nearly all soils have these in sufficient quantities and in suitable forms to supply the wants of ordinary vegetation, both wild and cultivated. But the three most important of all, nitrogen, phosphorus and potassium are not so abundant, or at least, not so easily available. If we do our duty in the line of thoroughly and frequently stirring the soil, and growing the pioneer plants already mentioned and the clovers, we will thereby set free much of these elements found in the soil, and get from the air considerable quantities of nitrogen.

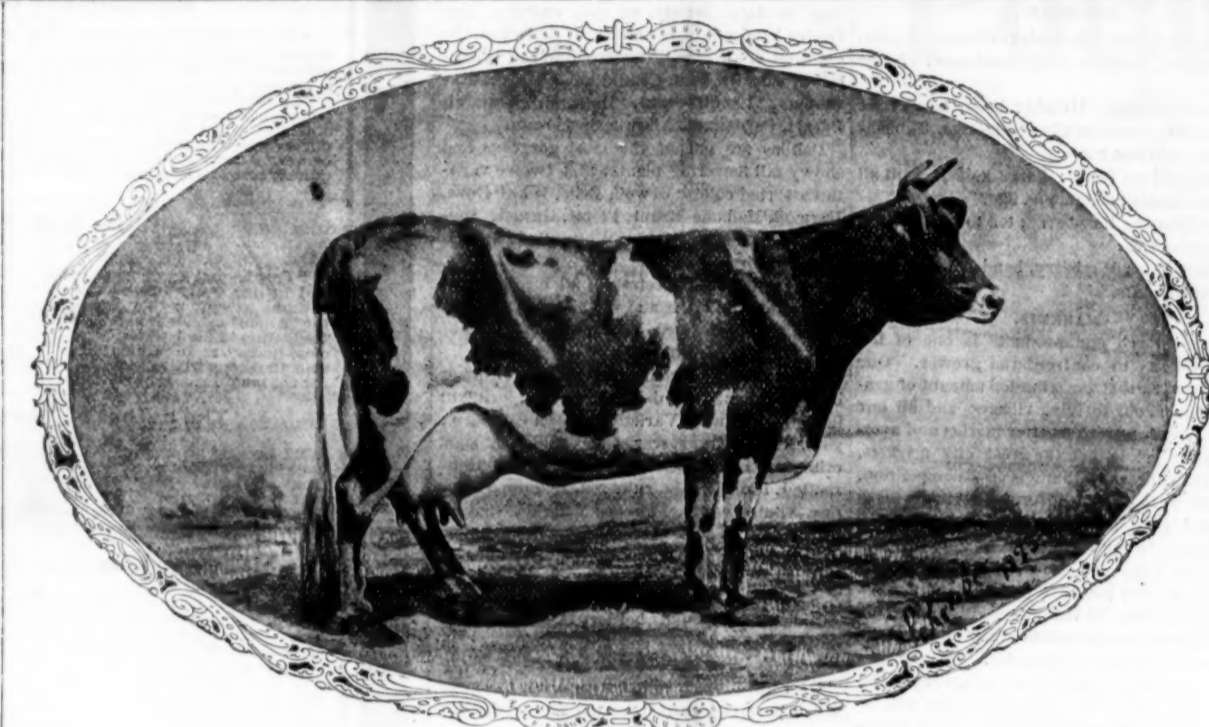
It is safe to say that there will often be found soils that may be greatly benefited by applications of manures of various kinds. The thing for the farmer, the vegetable gardener and the fruit grower to know is how to balance up the different plant foods in the soil, so that their various crops will each do the best that is possible.

Although it is true that crops of every kind need all three of what are known as the essential manures, nitrogen, phosphoric acid and potash, it should at the same time be kept constantly in mind that they are needed in variable proportions according to the several crops grown, and because of their variable effects upon the growth of different kinds of vegetation.

Nitrogen induces a leafy, succulent growth. This is just what the farmer needs to make his grasses and other forage crops grow luxuriantly. The vegetable gardener needs the same; but the fruit grower must be guarded against the use of too much of it. Where large crops of clover or cow peas, or plenty of rich stable manure are plowed under frequently, it will not be necessary to buy any nitrogenous manures, such as nitrate of soda, cotton seed meal and dried blood, for any kind of crop. In such a case phosphoric acid in the shape of dissolved bone or phosphate rock, and potash in the shape of muriate of potash, if applied to the clover or other nitrogen-gathering crops, will make them flourish wonderfully, and, in the end, be equally beneficial to the following crops, unless the clover is cut and sold off the farm. This should not be done.

It may not be generally known that a ton of clover hay is worth from \$8 to \$12, to plow under for manure. Think of this, you farmers, who are selling your clover hay for less than these prices, and buying costly fertilizers at a comparative loss. Rather, instead, sell something that is largely water, like potatoes, fruit and vegetables, and buy phosphoric acid and potash in their concentrated forms, and return fertility to the soil along with that in the clover or peas which will furnish the needed nitrogen.

There need be little fear of injuring any class of crops by adding phosphoric acid and potash to the soil, provided they are well scattered and mixed with the earth. But, if properly balanced for each crop, there will be more economy than in haphazard mixtures, and we all know that economy is something that should be studied on the farm much more than is done. The cereals are especially benefited by phosphoric acid, because they need it to make the grain plentiful and plump. It should be liberally mixed into every grain manure. Nitrogen will make the



JERSEY COW, IDA MARIGOLD.

PROPERTY OF MR. C. A. SWEET, BUFFALO, N. Y. FIRST PRIZE, WORLD'S COLUMBIAN EXPOSITION, CHICAGO, 1893

stalks large and thrifty, and potash and silicon will make them stiff and sturdy.  
H. E. VAN DEMAN.

#### Hornless Cattle.

During recent years the practice of dehorning cattle has gained in favor among farmers. A recent bulletin from the New Hampshire College Agricultural Experiment Station treats of the practice in its various phases. In discussing methods of preventing the growth of horns Dr. H. H. Lamson writes: "Many of the disagreeable features of dehorning may be avoided by preventing the horns of calves from developing."

The horns of cattle consist of two parts of different origin; the outer horny shell is a growth derived from the skin; the inner part or pith consists of bone and is an outgrowth of the skull.

At the birth of the calf each of these parts is undeveloped and only exists as a possibility but they at once begin to grow, and in a short time the young horn can be felt as a slight elevation or button.

The horn tissue develops from the skin just as do hoofs and claws in the lower animals; and nails in human beings. There is a zone in the skin about the base of the horn known as the matrix, from which new horn-cells are constantly being formed, the older parts being pushed on. If we destroy the peristome from which the bony part of the horn is formed and the matrix from which the horny part is formed we prevent the further development of the horn. In removing horns which are already more or less developed, as in dehorning mature animals, the cut must be made deep enough to include the matrix or the stump of the horn will continue to grow. It may not be out of place here to remark that there is no danger of cutting into the brain cavity, as at this point it lies very deeply. The openings frequently seen on removing the horns are only empty spaces with which the frontal bone is honeycombed.

In calves the growing points of the horns are small in extent and can be destroyed with little trouble. In our experiments we have made use of caustic potash. Caustic potash, so called, is a pure form of the same substance which constitutes the potash sold in cans for soap-making and cleansing purposes. It is in the form of white sticks, in diameter about the size of an ordinary lead pencil. As its name indicates it is a powerful caustic, rapidly destroying the skin and other tissues if kept in contact with them. In this property lies its value as a preventive of the growth of horns.

When properly applied it destroys the matrix or growing point of the horny tissue and the underlying peristome from which the bony part grows.

**DIRECTIONS FOR USING CAUSTIC POTASH.**  
The hair should be cut away from the young horn as thoroughly as possible so that the potash may come in intimate contact with the parts to be treated. The oily secretion should be removed

from the parts to be touched with the potash, by wiping carefully with a rag or sponge moistened with soap, suds, or water containing a little ammonia. Parts not to be touched should not be moistened.

The stick of potash is rolled up in a piece of paper so as to leave one end exposed. The exposed end is dipped in water to moisten it and then rubbed on the button or embryo horn until the skin begins to start, care being taken that the whole of the button and the border or matrix is included in the treatment. In young calves a few days old a surface half an inch or a little more in diameter will cover these parts.

Caustic potash, or caustic soda which answers as well, can be obtained at almost any drug store. When not in use it should be kept in a closely-stopped vial, one with a rubber stopper preferred or it will liquefy.

After the calf is two or three days old the sooner the potash is applied the better.

#### Fighting Asparagus Beetles.

A practice that is in high favor among prominent asparagus growers, according to Expert R. B. Handy, is to cut down all plants, including volunteer growth, in early spring to force the beetles to deposit their eggs upon new shoots, which are to be cut every few days before the eggs have time to hatch. Another measure of value consists in permitting a portion of the shoots to grow and serve as lures for the beetles. Here they may be killed with insecticides, or the plants after they become covered with eggs may be cut down and burned, and other shoots be allowed to grow up as decoys.

One of the best remedies against the larvae is fresh, air-slacked lime dusted on the plants in the early morning, while the dew is on. It quickly destroys all the grubs with which it comes in contact.

#### Five Minute Churns.

Every now and then there seems to be a need for calling attention to humbugs and fallacies that pester and live off the dairy interests. One that makes its appearance regularly is the two minute churn, or in some cases the five minute churn.

If farmers were properly educated on the subject of churning, there would be no demand for a churn to bring butter in less time than from twenty to forty minutes. For twenty-five years progressive and up-to-date dairymen have known this to be true and have governed themselves accordingly in selecting and using a churn. Editors of agricultural papers should know it if they do not know it, and therefore they should not admit to their columns advertisements of churns for which the principal claims made are that butter can be churned in them from two to five minutes. All such churns are constructed with internal devices, such as paddles, shafts and floats, all of which have a tendency to break the grain of the butter, while the churn of today that is endorsed by those who have a

practical knowledge of butter making has no inside fixtures.

The writer prefers not to be too often referring to one subject in his letters for publication, but, as before stated, this humbug churn matter is one that regularly comes to the front and as regularly it must be met. Now let editors and publishers of agricultural papers investigate this matter, and then if they are satisfied that the position taken in this letter is not correct, let them say so and give their reasons for position taken by them. On the other hand if they find out that it is correct and that the two and five minute churn, with their internal arrangements, are not the kind farmers should use, then let them refuse advertisements of such churns.  
Clinton, Iowa.

#### Lettuce in Pots.

Lettuce-growing in pots was a success at the New York Experiment Station. Seedlings were transplanted in pots when about two inches high, and the pots were embedded in soil. The plants so treated grew rather better than those set in benches.

When ready for market the lettuce could be tapped out of the pots and shipped with the ball of roots and soil wrapped in paper. In this way, the lettuce could be kept fresh and in good shape until ready for use. For local trade, it is suggested that lettuce be marketed in pots and the pots returned after the lettuce is used. The pot method gives a somewhat less yield in the same amount of space than the ordinary plant.

#### Cow Peas.

This crop has been called the poor man's bank, because, like clover and a few other crops, it increases the richness of the soil in which it grows. Its heaviest yields are obtained in the southern states. North of the Ohio River it is considered chiefly valuable as an addition to the list of drought-resisting soiling crops, and a crop which will yield a good amount of forage on a rather poor soil. Its feeding value, green or dry, is equal to that of red clover. Cow peas are being experimented with to some extent, the early varieties being used.

#### Fertility Wasted.

Professor Roberts considers \$250 a safe estimate of the value of manure produced during the seven winter months on a farm carrying four horses, twenty cows, fifty sheep and ten pigs. It often happens that from a third to a half of this value is lost by neglect and poor management.

It has been shown by actual tests at Cornell "that horse manure thrown in a loose pile and subjected to the action of the elements will lose nearly one-half of its valuable fertilizing constituents in the course of six months; and that mixed horse and cow manure in a compact mass, and so placed that all water falling upon it quickly runs through and off, is subjected to a considerable, though not so great a loss."

### THE PLOUGHMAN Farmers' Meeting

Was held in Wesleyan Hall, 36 Bromfield Street, Boston, Mass., April 9, 1898, at 10 o'clock A. M.  
Essay by Abel F. Stevens of Wellesley, Mass. Subject: Practical Gardening. Fruit and Vegetable Culture.

The last MASSACHUSETTS PLOUGHMAN Farmers' Meeting of the season was held Saturday morning, April 9, with an essay by Abel F. Stevens of Wellesley, Mass., on Practical Gardening, including Fruit and Vegetable Culture. Mr. Ware, who presided, introduced the speaker as one who was fully capable of bringing to the audience much valuable information on a subject which was especially timely at this season.

#### ADDRESS.

Gardening was the earliest employment of man and is today the most attractive. A taste for this delightful vocation is almost universal in our country. That garden in which Adam and Eve were placed was the primitive Paradise, and to this day, a tastefully arranged judiciously planted garden with fragrant flowers and delicious fruit has still lingering about it, many of the charms we are wont to attribute to the original Eden, and to every true lover of gardening, it seems in the fullness of its summer beauty and its autumnal fruitage to be indeed almost a "Paradise Regained." The progress of invention, the developments of science, and the spur of enterprise are indeed grand in other departments of industry, but in all, the horticulture of our own dear New England is to have its full share.

The first seeds planted by man were germs from which sprang the civilization, elevation, and refinement of the human race. So it is with the amelioration and improvement of our fruits, for from the wild sour crab, the pucker pear, the bitter almond and the austere plum, came the tender, splay apple, the melting juicy pear, the luscious peach and delicious plum, and from the wild, rank, foxy grape, came the splendid varieties which now adorn our tables and "make glad the heart of man."

The art of gardening is such a grand science that it demands of devotees to be broad, generous and thorough students of Nature's grand laws. In fact our horticulture will never take the high rank it should, until men everywhere recognize it as the most cultured of all the learned professions, and as that vocation upon the success of which depends the whole fabric of human society.

The agriculture of no people or country is complete in itself. Everything valuable in our gardens and fields is the result of improvement, we have hardly a plant or fruit in its original state, our vegetables and fruits, and our grains are improvements by change of climate and culture on inferior stock. Fruits as delicious as the peach, and vegetables as delicate as celery, have been derived from the most arid and poisonous originals. Of a mere thorn, man has made—as if by enchantment—the beautiful and fragrant rose; before he thus labored the olive was dry and offensive, the peach bitter, the pear was hard and woody and the apple tree was full of thorns; man labored—and the thorns fell; the rose doubled and trebled its flowers, the peach and pear filled with perfumed juice, the olive lost its bitterness, and the wild grasses, were converted into waving fields of life sustaining grain. The celery, for instance, once a tough, bitter and dangerous plant, repulsive in its appearance, and shunned by man and beast as worthless as food, now by the skill and care bestowed upon it, has become a crisp, tender and delicious salad, affording nutritious vegetable juice eminently adapted to our wants as winter food.

**IMPROVEMENT THE WATCHWORD.**  
Improvement should be the watchword of the farmer. In the great agricultural improvements which have been effected, the mechanic has done more than his full share. His activity of mind has wrought greater changes in the improvement of implements, than the farmer has in the management of soils and crops. While we are behind England in production, we have surpassed her in the mechanical appliances to agriculture. The progressive farmer and gardener should be a close student of science, there is no profession demanding so wide a range of scientific knowledge as his. He cannot even stir the soil, or plant or harvest the crops with enlightened wisdom without the immediate application of some one of the sciences.

The truth is no occupation calls for more varied and accurate knowledge than agriculture. Every cultivator should have some knowledge of chemistry, botany and geology, for these lie at the foundation of scientific and practical agriculture. For geology will give him a knowledge of the constituent parts of the soils he cultivates, and thus improve those that are deficient in any of the elements of fertility; an acquaintance with botany (the most beautiful of all the sciences) would give him a better understanding of the adaptation of the various species of fruits, flowers, plants and vegetables. He should know the nutritious values from the worthless weeds, and by a knowledge of horticulture he could wonderfully improve the

fruits by hybridizing, and thus produce new and choice varieties. He should then surround himself with fruits more delicious and profitable than summer climates ever yielded, and flowers as beautiful as ever grew in Eden. But the great essential is agricultural chemistry; the contributions of this science to the progress of agriculture are by no means small or unimportant. Though Sir Humphry Davy opened the doors to progress and improvement in this direction, it was not till Baron Liebig—the renowned German chemist—in 1850 announced propositions that aroused a world of thought and study, and awakened the attention of intelligent farmers to the importance of applying the results of chemical investigations; and in some respects essentially modified the practice of all civilized countries.

There is chemical action everywhere about the farmer—going on in his crops, soils, fertilizers, etc. He must have a knowledge of these and the kindred sciences so that he may act in unison with nature.

The laws of nature should be secrets to none, and he that has a knowledge of any important discovery in horticultural process should gladly impart it to others. The result of all experiments should be noted down and this experience given to our associates, for it is the constant interchange of facts derived from experience that we owe much of our progress in horticulture.

Let the cultivators of the soil give our art more attention, and promote this interesting and benevolent employment. To my mind, the production of delicious fruits and fragrant flowers is only the promise of a healthier race, of happier homes and a higher and nobler civilization.

In the past too little attention has been given to the proper arrangements of trees, shrubs and flowers in the decoration of our homes. Every American citizen should have sufficient love for his home, and be imbued with a spirit of independence—a pride and love for the creation of one's own—to make every improvement possible for the embellishment of his home.

From years of close study, that we have given the subject, and a practical knowledge as to the character and habits of trees and plants, the requisites of planting or arranging them for a harmonious effect, we observe there is a common error in

#### ORNAMENTAL GARDENING.

that of promiscuously mixing of herbaceous plants with shrubs and trees, by which neither can thrive properly, and the effect of the one is injured by that of the other, as it destroys unity of beauty in landscape art.

In every small garden, or more commodious grounds, always have some leading feature such as foliage trees, ornamental shrubs or flowering plants, also the creating of a flower garden proper, a water fountain, or rocky for plants.

But in the constructing of all these permanent and beautiful ornaments, let them harmonize with the surrounding grounds. Let no harsh lines be left to break the smoothness and harmony of blending from the lawn to the flower beds or walks—ever remembering the softness of nature's own laws, which always resolve into one another without any offending feature.

In the preparation of the grounds let the soil be trenched deeply, by plowing or spading, keeping the surface soil always on top and thoroughly enriching it before planting.

#### MAKING A LAWN.

In all our rural walks the charm of every place is a beautiful lawn, and we will give practical direction for making lawns, sowing and keeping it in its natural beauty during the growing season. Let the ground be thoroughly prepared in April or August, fully eighteen inches deep, of a good, rich, loamy soil, making the whole surface of uniform depth, and same quality, whether on a rising knoll, or a low, level grade; enrich the soil with a mixture of twenty bushels wood ashes, ten bushels bone meal, two bushels salt, and one bushel of plaster, per acre. Incorporate all these thoroughly with the soil, rake and pulverize with the roller, until all the surface is a fine seed bed. Then sow very evenly the following formula:

Two bushels, Kentucky Blue Grass (Poa pratensis); two bushels Red Top (agrostis vulgaris); one-half bushel Creeping Bent (agrostis canina); one-fourth bushel Sweet Vernal (anthoxanthum odoratum); one-fourth bushel White Clover (trifolium repens). Five bushels of above mixture per acre, using this quantity in proportion to the area sown.

In sowing, take one-half of the seed to be used sowing it evenly over the whole surface from east to west; with the other half sow it from north to south, then rake in deep and well and finish with a heavy hand roller going over the entire surface. If dry weather prevails sprinkle at sundown. Let the young grass get 3 to 4 inches high before cutting it the first time. After that cut it every ten days. Give water in moderation as needed for more fine lawns are ruined by over watering than for the lack of water. Annually in October apply a heavy dressing of wood ashes, and in April a light dressing of nitrate of soda.

Now with proper attention to cutting, watering, dressing and rolling you may have the most beautiful, velvety lawn, so charming to the eye and the pride of its owner, and it should last for twenty years without renewing. Don't ruin the above tender grasses and bring in the coarse, sallow, wiry water grass that is the ruin of so many fine lawns. Don't cover it in the fall with coarse, odoriferous stable dressing full of weed seeds to grow and injure the roots of the grasses. Don't play croquet.

(Continued on Second Page.)

## FARMERS' MEETING.

(Continued from Second Page.)

tennis or games so injurious to the fine turf. A well kept lawn is the most attractive feature about our charming, rural homes.

## THE VEGETABLE GARDEN.

A good vegetable garden is the most important addition to any home, be it the farm house, the rural home or country villa. A neat and well-kept lawn (as we have said) is certainly a beautiful attraction to a home, but the garden from which we draw our daily supplies of choice vegetables is a source of greater pleasure as well as of true economy.

The art of gardening is the most ancient of all, for the first man was "put into the garden to dress and to keep it." An occupation so ancient, so productive of pleasure and profit to mankind, is worthy of the devotion of all who have the care and culture of any portion of mother earth.

The increasing taste for gardening in all its branches is truly marvellous, and yet our people have made but a beginning—for there is a broad field to occupy—in improved methods of culture and superior quality of production.

There is no one, be he calling what it may, who would not be far better for the change of employment for body and mind which a few hours devoted daily to gardening would afford; open air work so engaging to the mind, also remunerative, must likewise induce cheerfulness of disposition and health of body, and must tend to develop that attachment of the citizen to his home which is one of the strongest safeguards of society against idleness and immorality.

Simple as the cultivation of vegetables is considered by many, yet to cultivate successfully, requires skill, energy and knowledge of plants, the varieties, their habits of growth, adaptation to soils, etc., a great many minor features in their culture that we can only become acquainted with by practice, and acquire a correct knowledge by experience. First the garden, then the vegetables.

## SITUATION.

The first and one of the most important considerations in selecting a garden is the situation; the best is a level piece of land with natural drainage, with a southeastern exposure, that it may have all the advantages of the morning sun; and for extra early crops have it protected and sheltered from north winds by hedges or fences. Always avoid the proximity of large trees as their roots will exhaust the plant food in the soil, and their shade will injure the growing crops. Next to a good situation for our garden is the right kind of soil.

The best, naturally, is of a rich, mellow, loamy texture and the poorest either a very light, sandy gravel or a stiff, cold clay but an admixture of these two as they reciprocally correct the defects of each other, with the addition of organic matter, will form a soil suited to the cultivation of nearly all garden vegetables. But any soil with judicious management, manuring and drainage can be made fertile and productive. It is said that the once barren, drifting sands of the Great Salt Basin of Utah have been converted into the most luxuriant and productive gardens that there are on this continent, and today the Mormons by their thorough culture and most excellent system of irrigation have turned this barren waste that bore only wild sage bushes into flower gardens and fruitful fields. So we can select a good situation and then make your soil just what it must be, fertile by the application of

## MANURES.

which is the very essence of successful gardening, and it must be procured from every available source, but the main reliance is stable manures, in fact anything which, being added to the soil, promotes the growth of plants is a manure. They directly assist vegetable growth by entering into the composition of plants and by absorbing and retaining moisture and gases from the atmosphere and indirectly assist the growth by decomposing the soil and rendering the elements available by improving the texture of the soil. They are divided into two classes viz: Organic and inorganic; the former embraces vegetable and animal substances and the latter minerals.

We should have a complete and intelligent system of fertilizing our soils. A frequent cultivation of the soil is of itself a manure, and the best preventive of a drought is a deep and thorough stirring of the soil.

## PLANT FOOD.

The live question to the practical progressive farmer, is just what do I need for plant food, and how to obtain it cheapest. We have noticed one thing in fertilizers, viz: That those who have used agricultural chemicals carefully never go back to the system of buying manufactured fertilizers for plant food for three reasons—First: Can buy the needed plant food much cheaper in the form of chemicals; Second: Can adjust the proportions of the various elements more economically to their land and crops; and Third: Can make sure that each fertilizing ingredient is in the form best suited to their crops. The three important elements of fertility are nitrogen, phosphoric acid, and potash.

Nitrogen is one of the most important, and is the most costly of all, and is furnished in pure and available forms in "sulphate of ammonia," nitrate of soda and cotton seed meal.

Available Phosphoric Acid. This necessary ingredient is cheapest in the form of "Acid Phosphate," and dissolved boneblack, and finely ground South Carolina phosphate rock, or "Florida," and these furnish it in the best form for plant use.

Potash can be bought cheapest in the form of a high-grade muriate of potash, eighty-five per cent muriate, and for most crops find it as valuable as the higher priced sulphate of potash. Either form is cheaper for agricultural purposes than "Canada Ashes."

## FERTILIZERS FOR GRASS.

Formula. Top-dress when the grass begins to look green in spring and not before this. 250 pounds nitrate of soda, 75 pounds acid phosphate, 75 pounds Nova Scotia plaster, 300 pounds muriate potash; mix well, apply before rain, 600 pounds per acre.

## SEEDING DOWN FOR HAY.

Formula:—400 pounds dissolved bone-black, 400 pounds fine ground bone, 400 pounds cotton seed meal, 300 pounds muriate of potash. Apply evenly and harrow deeply before seeding. Cover with "weeder" and roll. 1500 pounds per acre.

Formula for Clover:—300 pounds dissolved bone black, 300 pounds muriate of potash, 300 pounds sulphate of potash and magnesia, 300 pounds Nova Scotia plaster, 1200 pounds per acre. Apply early in spring.

## FERTILIZERS.

Formula for Corn:—200 pounds nitrate of soda, 200 pounds cotton seed meal, 700 pounds acid phosphate, or dissolved bone black, 200 pounds muriate potash, 200 pounds sulphate of potash and magnesia, 100 pounds plaster (Nova

Scotia); 1600 pounds per acre. Cost, \$30.00. Above well mixed and sown broadcast and well harrowed into soil. If the land is sandy use no "nitrate of soda" but use in its place 400 pounds cotton seed meal. For sweet corn for market use 300 pounds cotton seed meal more than for field corn.

Note.—Cotton seed meal is one of the cheapest sources of nitrogen in a reliable form—as it furnishes nitrogen in a slow and continuous manner as the plants require.

## FERTILIZERS.

Extra good formula. Potatoes.—Mix 100 pounds sulphate ammonia, 300 pounds nitrate of soda, 300 pounds cotton seed meal, for nitrogen; 300 pounds dissolved bone black, 300 pounds acid phosphate or "flour," for phosphoric acid; 400 pounds sulphate of potash and magnesia, 200 pounds muriate potash, 100 pounds Nova Scotia plaster, for potash; 2,000 pounds on good soil and land; this is sufficient for two acres and should be applied as follows:

Mix well the potash, plaster and magnesia, sow broadcast and harrow in thoroughly; furrow out the land and apply evenly in the drills the mixed sulphate ammonia, cotton seed meal, bone black and flours. Run the weeder lengthways of rows, drop seed, cover with Acme harrow cross-wise drills, apply nitrate of soda in three weeks.

## FERTILIZERS FOR VEGETABLES.

Formula for garden crops: 600 pounds dissolved bone-black for phosphoric acid; 300 pounds muriate of potash, 200 pounds sulphate of potash and magnesia for potash; 300 pounds nitrate of soda, 600 pounds cotton seed meal for nitrogen; 300 pounds Nova Scotia plaster; 2,300 pounds; mix evenly, sow broadcast, except nitrate of soda, which apply when plants get well started, and harrow thoroughly.

FORMULA FOR FRUIT TREES, VINES, PLANTS, AND BERRIES. One hundred pounds sulphate of ammonia, 500 pounds dissolved bone-black, 200 pounds muriate of potash, 200 pounds sulphate of potash and magnesia, 200 pounds Nova Scotia plaster; 1,200 pounds.

## A GRAND SUPERPHOSPHATE.

Extra.—1,000 pounds dissolved bone-black, 300 pounds sulphate of potash and magnesia, 200 pounds sulphate of ammonia, 100 pounds nitrate of soda, 300 pounds Nova Scotia plaster; 2,000 pounds. Spread stable manure and apply this in drills and mix well.

## PLANT FOOD FOR FLOWERS.

Formula.—100 pounds dissolved bone-black, 50 pounds muriate of potash, 50 pounds nitrate of soda; 200 pounds. Mix thoroughly and apply and rake into soil before watering the plants.

## OUR SPECIAL FERTILIZER FOR STRAWBERRIES.

Formula.—400 pounds muriate potash, 400 pounds dissolved bone, 200 pounds nitrate soda; 1,000 pounds per acre. Mix well and sow evenly over plants in early spring. This is rich in potash and phosphoric acid, and produces vigorous growth of the plants and heavy yield of the fruit.

## VEGETABLES.

Bush Beans, Green Pod.—Imperial Early Valentine, Early Champion, Warren.

Wax Pod.—Thorburn's Refugee, Davis Kidney Wax, Wardwell's Wax.

Pole Beans.—Worcester Horticultural, Sieberts Early Lima, Scotia.

Beets.—Eclipse, Crosby's, Edmunds, Dewings.

Carrots.—Early Scarlet Horn, Danvers, Chautauque.

Cabbage.—Express, Henderson's Stone Mountain, Savoy.

Sweet Corn.—Crosby's, Champion, Potters Excelsior, Stowell.

Cauliflowers.—Dwarf Erfurt, Snowball, Autumn Giant.

Celery.—Early Arlington, Giant Pascal, Golden Heart.

Melons.—Arlington Musk, Hackensack, Montreat.

Watermelon.—Vick's Early, Mountain Sweet.

Pears.—Alaska, Natts Excelsior, Strategem, Champion.

Onions.—Early White Pearl, Yellow Cracker, White Queen, Red Globe, Yellow Danvers.

Pepper.—Golden Dawn, Ruby King, Large Bell, Red Giant.

Parsons.—Arlington Long White, Imperial Guernsey, Hollow Crown.

Squash.—Giant Crookneck, Early Prolific, Boston Marrow, Essex Hybrid, Hubbard.

Tomatoes.—Early Ruby, Comrade, Potomac, Imperial, dwarf champion stone.

Turnips.—Millan, White Egg, White Globe, St. Andrews, sweet German.

Potatoes.—Early Harvest, Early May, Washington, Carman No. 1 and No. 3.

Spinach.—Thick Leaf, Viroday, Bloomdale, Victoria, New Zealand.

Salsify.—Mammoth Island, French.

Parley.—Champion, Moss Curled.

Asparagus.—Palmetto, Columbian.

Rhubarb.—Victoria, Monarch.

Cucumbers.—Japan Climbing, Ivory Monarch.

## SMALL FRUITS.

These hold out to the garden cultivator the inducement of an immediate return upon the investment, a crop of fruit and an increase of the stock of plants from ten to twenty-five per cent in strawberries and five to ten per cent in raspberries and blackberries. The culture of all the small fruits has other attractions besides that of profit. The demand for choice fresh fruits is increasing rapidly; as a rule a luxury is now a necessity for our tables. As a rule the supply creates a demand. These contribute to the health, comfort and economy and makes home pleasant. Everyone likes good fruit.

## STRAWBERRIES.

stand at the head for profit among small fruits. The best soil is a rich sandy loam with a clay subsoil well fertilized with phosphoric acid and potash, either from stable manures or the chemical elements found in bone and muriate of potash. Apply at the rate of 1500 pounds per acre evenly spread on furrows and well harrowed into soil. With the above conditions and an abundance of moisture in the soil, or that can be applied when needed, it will be the ideal place for strawberries.

Varities:—Early—Beder Wood, Haverland, Bubach. Medium—Clyde, Enormous, Tennessee. Late—Brandywine, Glen Mary, Michigan. New Varities.—Sample, late, superb berry; Itebella, late, very productive; Bismark, a beautiful late berry.

Plant food and water makes this crop one of the most profitable of all. Hale speaks of an acre that was irrigated the past year which yielded 6640 quarts at eleven cents, \$730.40; non-irrigated, 2400 quarts at eight cents, \$192; profit 4240 quarts, \$538.40, showing what plenty of water will do just at the right time, giving an increased yield of 276 per cent, and increasing the selling price thirty-seven and one-half per cent; the cost of irrigating that acre was just \$85. Chemical analysis shows the composition of strawberries to be 90.9-10 water, and 91-10 solids.

Good healthy plants of the productive varieties, with sufficient fertility and an abundance of water, are the ideal conditions for strawberry culture.

## RASPBERRIES.

follow closely on the strawberry crop and are very profitable. They need moisture and mulching, good clean culture and pruning.

Red Varities: Millers, Loudon, Cuthbert, Columbian. Superlative, Harris, Worthing.

Black Varities: Palmer, Cumberland, Conrath, Kansas, Hillborn, Onondaga.

## BLACKBERRIES.

Agawan, Eldorado, Rathburn.

## GOOSEBERRIES.

Pearl, Chautauque, Roche, Red Jacket, Golden Triumph, Keesake.

## CURRANTS.

Pomona, Wilder, Red Cross, Ruby, Fays, Purity, Victoria. This fruit is paying good profits with increasing demand.

Give them strong soil, heavy manuring with mulch, pinch back new growth to five inches and prune out old wood. Dust foliage with hellebore and put a peck of ashes to each bush in the fall.

For our fruit garden, well worthy of testing are these

## NOVELTIES.

Rasp-Blackberry Hybrid: Primus Logan, phenomenal, immense fruit, handsome, of fine flavor.

Straw-Raspberry Hybrid: beautiful berries good quality, wonderfully productive, 30 bushels from 1800 foot rows.

Japan Balloon Berry: Large golden fruit all summer, handsome, unique, fine.

New Climbing Raspberry: ten to fifteen feet, very productive.

Golden Japan Mayberry, handsome in foliage luscious in fruits.

## MARKETS.

Where to sell our products is one of the first questions to confront the grower. Our experience is, that for a limited amount of general produce, our thriving villages and all our larger towns, furnish a better market and average better prices than the great city markets, principally because there is less competition.

A word as to selling the crops. Always wash trim and pack neatly, use only clean boxes and crates of a uniform style, plainly marked with your name and place, so the consumers may know your products in the market. Always in packing the various crops, discard all imperfect specimens so as to secure uniform contents, as to size, shape and color. Where your goods are known to be just as they are represented by their looks, the demand for them will increase and in like ratio the price. Do not overstock your market for nothing will make prices drop like a glut in the market, and where prices drop the profits do likewise.

As a rule, don't hold crops for a high price for the country is large and transportation cheap. Green crops are perishable and remember it is only the humble penny that makes quick shillings. Let your "Trade Mark" be "honest goods at fair prices." Let a high sense of honor govern you in marketing. Have a love for your business, give it your undivided attention, respect your calling, and it will pay. Always along the lines of your specialty seek to originate and to improve on the best means, methods and things at your command, ever remembering that "trifles make perfection while perfection is no trifle."

## THE FLOWER GARDEN.

No home is complete without its flower garden. These beautiful ornaments of nature loved, cherished and most worshipped by all people in all lands and emblematic of

"Those gems of earth in which we see What Eden was, what Paradise will be."

A flower by universal consent is acknowledged to be so excellent in design and so lovely in endless variety of its form and color, that it has become a type of all earthly perfection and beauty. The ingenuity of man is exercised on the cultivation of flowers in all the civilized countries of the world. The love of flowers is one of the prevailing feelings implanted in the human mind. One of the earliest signs of delight in a child is called forth by the sight of flowers. In fact, it is a sure token of progress in the comforts of civilized life when flowers receive some share of attention. A cottage flower garden is one of the surest means of improving the conditions of the poor, for it is not only a pleasing sight but it is a certain proof that all is well with the occupants. It is an indication of industry and cheerfulness.

## HERBACEOUS PERENNIALS.

Hardy Border Plants. The following list cover the entire season. Achillea, two feet, pearly white, excellent for cutting.

Aquilegia, three feet. Red, white and blue, the national flower.

Astilbe chinensis, two to three feet. Graceful panicles of pink flowers.

Campnula grandiflora, two to three feet. Very large, dark blue.

Conopsis grandiflora, three feet. "Harvest Moon" beautiful golden yellow flowers, three inches across. From spring till frost, best for cutting.

Dianthus, one half foot. Mound pink. Profuse bloomers, finely fringed, bluish pink, sweet scented.

Heuchera sanguinea, one and one-half feet. Handsome foliage and bright red flowers all summer excellent for bouquets and vases.

Iris germanica, two feet. Rich blending of colors, extra fine for vases.

Lycalis ar. fl., two to three feet. Lamp flower, brilliant red, purple and white, sweet scented flowers from early summer till fall.

Monarda didyma, two to three feet. "Sweet Bergamot." An admirable plant, having sweet scented foliage and large heads of brilliant scarlet flowers.

Peonias, three feet. No garden is complete without its border of this grand old flower in all the shades from pure white to darkest red of immense size.

Hybrid Phlox 2 to 3 feet. No garden however small seems complete without some of these grand flowers with their gorgeous heads of bright sweet scented flowers lasting in beauty from June to September.

Polemonium Richardsonii 2 feet. "Jacob's ladder" producing long spikes of sweet scented sky-blue flowers with golden anthers very useful for cutting.

Raphanistrum Colliniana, 2 to 3 feet. "Flowering Spurge" having abundance of pure white flowers from July until frost, one of the best hardy perennials for cutting purposes.

Rudbeckia laciniata fl. pl. feet. Golden Glow. This is the handsomest early fall flowering double yellow perennial ever introduced; fine for cutting.

## FOLIAGE PLANTS.

The sharp contrast in the color of foliage always makes this class of plants very conspicuous and attractive. Among the best varieties we name the following:

Eulalia Japonica Variegata: The foliage is beautifully variegated with a creamy white stripe down the centre of the green leaf.

Eulalia Japonica Zebrina: A distinctly yellow band running across the leaf making a most remarkable and variegated grass.

Sedum Spectabile Variegatum: Of beautiful variegated foliage and showy heads of rosy purple flowers.

Euphorbia Variegata, "Mountain of Snow": A very conspicuous plant, the margin of each leaf having a broad white surface covering two-thirds of the green leaf.

Thymus Argentea fol. var.: These are extra fine plants for a variegated border to walk.

Alyssum Argenteum: A very fitting companion plant to the above, for edging, having a silvery foliage and masses of yellow flowers during summer.

Enonymus Radicans Variegata: This is the ideal plant for setting near stone walls, of the most exquisite foliage, a charming blending of red, white and green.

## GARDEN BULBS.

Gladolius: This is the most satisfactory of all garden bulbs, as it will grow and bloom in any kind of soil, and making a brilliant display of coloring equalled by few and surpassed by none. Hybrid Seedlings, Lenonia Hybrids, Africana, Duchesse, Grand Rouge, Lord Byron, Flamingo, Shakespeare, John Bull, Snow White, Thall, Octoroon, Flamboyant, Purpurea Auratus.

## LILIES.

No brush can paint or pen portray the exquisite purity and delicacy, yet magnificent grandeur of the stately lily. It is the perfection of floral beauty, of easy culture. Our twelve handsome varieties are: Auratum, the grandest of all lilies; Tenebrosum, the brightest of all; Brownii, Candidum, Childii, Excelsium, Longiflorum, Rubrum, Kramerii, Parryi, Pardalium, Album Speciosum.

Dahlias are one of the most gorgeous and showy fall flowering plants; best twelve varieties assorted colors: Jewell, Belle, White Dove, Hermon, Madame Brunet, Floret, Garnet, Souvenir, Livonia, Nymphs, White Bellder, Argentea Variety.

Tuberose. The sweetest of all blooms used to decorate the bride and the bier: Excelsior, Pearl, Orange Scented, Variegated.

## CANAS.

The most popular and magnificent summer blooming plants, handsome in foliage, brilliant in flower. Dwarf Varities: Queen Charlotte, gold, Madam Croix, scarlet and gold, Flamingo, crimson, Golden Star, yellow, Fairy Queen, spotted, Philadelphia, ruby red, Medium Varities, Alsaise, white, Florence Vaughn, spotted, Ehemantel, scarlet, Primrose, yellow, Alba grandiflora, white and pink, Bouvier, Vermilion.

## NEW GIANT VARIETIES.

Italia, scarlet yellow border, Austria, yellow dotted with red.

## GARDEN ANNUALS.

Of course these will always occupy a large space in every garden. Such rapid improvements are being made by all enthusiastic seed growers that each season new and improved varieties are introduced. Always have a rich soil for all flowering plants; no garden is worthy the name without its spacious beds of asters, balsams, candytuft, celosias, delphiniums, dianthus, petunias, phlox drummondii, sweet peas, portulacas, stocks, verbenas, zinnias.

In new varieties we want in the plants, vigorous growth of strong foliage, hardiness, not susceptible to climatic conditions, productive in yield, while in the fruit we need large size, the form, good quality, firmness and good color. Fruit growers continue to sow the best seeds from the best varieties. Test carefully the most promising seedlings; "prove all things, hold fast that which is good." Let us go on raising varieties to replace the excellent kinds that are so fast disappearing, having filled their mission, like the noble men that planted them.

When I reflect upon the progress of horticulture and its benign influence on the health and happiness of mankind. I am most grateful to those noble men who did so much to help the cause in its earliest days, and by their laborious plantings we are now reaping such rich rewards and enjoying the fruits of their toil, which contributes so much to our happiness and welfare today. Let us in our day and generation contribute something to the "shrine of Pomona" that will be beneficial to those that may come after us. For as we have enjoyed what others have planted, let us now plant for others to enjoy.

## DISCUSSION.

At the close of Mr. Stevens' comprehensive address, Mr. Ware, the presiding officer, said:

(Continued on Eighth Page.)

## America's Greatest Medicine

Is Hood's Sarsaparilla.

GREATEST, Because Hood's Sarsaparilla is the medicine to which the bulk of the people naturally turn when overtaken by sickness, caused by impure blood, scrofula, dyspepsia, etc., or when recovering from debilitating blood-poisoning diseases like diphtheria, scarlet fever, etc.

GREATEST, Because of the vast number of testimonials which come from every city and hamlet in the land, telling of marvelous cures and overflowing with gratitude.

GREATEST, Because it eradicates every vestige of scrofula, cures the worst cases of filp disease, subdues the itching and burning of eczema, heals all sores, boils and eruptions, and every ailment due to impure blood.

GREATEST, Because it conquers dyspepsia by toning and strengthening the stomach, cures rheumatism by neutralizing the acid in the blood, overcomes catarrh by removing the scrofula taints that cause it.

GREATEST, Because unequalled by any other medicine for supplying the nerves with pure, rich, nourishing blood, and thus curing nervousness, neuritis and nervous prostration.

GREATEST, Because of economy and strength, Hood's Sarsaparilla being the only medicine of which it can truly be said, "400 does one dollar."

GREATEST, Because it is prepared in the largest Laboratory on earth—a building which contains more than three acres of floor space.

GREATEST, Because it is peculiar in combination, proportion and process and possesses curative properties unknown to any other medicine.

GREATEST, Because of the greatest cures, greatest merit, greatest sales, greatest hold upon the confidence of the people as an honest medicine.

Hood's Sarsaparilla Is America's Greatest Medicine. Sold by druggists. Prepared only by C. I. Hood & Co., Lowell, Mass.

## America's Six Greatest Dairying Authorities on Cream Separators.

University of Wisconsin Experiment Station.

"Another year's experience in our creamery, which we operate in a practical way as well as for experimentation and instruction, has given us still higher appreciation of the 'Alpha' de Laval Separator. The exhaustiveness of the skimming under the varying conditions of milk-flow and temperature continues highly satisfactory and the machines give full evidence of lasting qualities under daily use."

W. A. HENRY, Head and Director.

Cornell University Experiment Station.

"Another year's experience serves to confirm our opinion of the 'Alpha' de Laval Separator. It has been my good fortune to observe closely the operation of a large number of separators of the various kinds in general use, and my observation has led me to believe that in material, workmanship, and efficiency of separation, the 'Alpha' de Laval machines easily rank first."

H. H. WING, Professor of Dairy Husbandry.

Michigan Experiment Station.

"It gives me great pleasure to repeat my testimony as to the value and efficiency of the de Laval Separator. For another year they have been in constant use under my immediate observation. The per cent of fat in the skim-milk is seldom more than a mere trace. Although subjected to the trying conditions of our Dairy course, where beginners must put them together and operate them, they have required little or no repairs and are still in excellent condition. The results of a long course of experiments, during which these machines have been subjected to every reasonable test, commend them for efficiency, thoroughness of skimming, small power required, ease of management and perfect construction."

CLINTON D. SMITH, Director.

Dr. S. M. Babcock.

UNIVERSITY OF WISCONSIN EXPERIMENT STATION.

"For the past six or seven years we have used at the Experiment Station and in our Dairy School nearly every type of the de Laval Separator, and without exception they have given excellent satisfaction. We have had the 'Alpha' machines in our Creamery and Dairy School since their first introduction in the United States. These machines are easily managed, skim close under varying conditions, run light, cost little for repairs, and give a smooth cream, well suited for pasteurizing and the general trade, as well as for the manufacture of butter."

S. M. BABCOCK, Chief Chemist.

The author of "American Dairying."

"I became acquainted with the 'Alpha' de Laval Separator when first introduced in this country, while in the employ of the Wisconsin State Experiment Station as Dairy Instructor, in 1891. Its

## POULTRY.

## Poultry in the City.

About one-third of all the poultry raised in this country is owned in cities, towns and villages, and, it may be added that town people nearly always keep pure breeds, and know as much about raising poultry as farmers. Concerning the keeping of chickens in towns, Mr. Charles Graf says: "I think a small flock pays better in a city than in the country. I have a flock of twenty-two chickens—eight hens and fourteen pullets, which I raised myself. I keep them in a coop 5x9 feet which stands in a yard 18x20 feet. In the months of January I got 257 eggs, and the cost for food during that period was sixty cents for meal and corn.

"All the scraps from the table were saved, even the water the vegetables were boiled in. Then I boil potato peelings, rutabaga and turnip peelings, cabbage leaves, etc., to last three or four days. With that, the kitchen scraps and a handful of meal, I fed my chickens morning and night, but give it to them warm. But where the city folks have the advantage over the chicken raisers in the country is in the feeding of green bone, which they can get at the butcher's for the asking. I have a green bone cutter and I would not part with it for a good sum, if I could not get another. Of course it costs a great deal for a few chickens, but the saving in food will pay for it in a year, leaving out of the consideration the gain in eggs."

The house and yard are both rather small for twenty-two hens, but Mr. Graf got 257 eggs in January, which is evidence that he manages them properly. The size of the yard is not so important as to keep the hens at work. They can be kept busy on a small plot as well as in a large space by giving them litter in which to scratch. When feeding them aim to give them too little rather than too much. Allow them to finish their meals somewhat hungry, and then scatter a gill of millet seed in the litter, which will induce them to scratch and work vigorously. It is not wise to feed them every time you have scraps. A light meal in the morning and a full meal at night is sufficient, especially in summer, or they will become too fat and have bowel disease.

## Goslings.

Hens make good foster mothers for goslings, so do the ordinary brooders. They are more easily taken care of than chickens and require only a very low enclosure with no cover; a foot in height is enough to restrain them. They are ready to eat grass almost as soon as hatched and will eat a great deal of it.

Their grain food is much the same as that of chickens, but should contain a large proportion of green stuff. A mash of shorts and cooked vegetables is excellent and may be fed three times a day. When eight or nine weeks old and two weeks before they are to be marketed, they should be fenced up and fed stiff corn-meal dough and beef scraps.

Goslings are rather timid and should not be unduly disturbed or frightened, as it will interfere with their growth. There is a good demand for green geese weighing from fifteen to twenty pounds per pair, and they should reach that weight at ten or eleven weeks of age. Gray American goose is the favorite in this section.

## For Setting Hens.

A very good arrangement is to have a long box about one foot six inches in height, without bottom, divided into compartments, barred in front, and having a sliding bar in the center of each which can be raised to let the hen out. It may be made long enough to accommodate almost any number of hens, and placed in a retired situation where it will be sheltered from wind and rain. The best time to place the hens on their nest is at night, for then they are likely to sit quietly and become accustomed to their new position; but there should be no hurry to put good or valuable eggs under them, for if they happen to get broken, a few common eggs will do for this purpose for a day or two, until all are sitting quietly, when they should be removed and the eggs from which it is intended to hatch chickens placed beneath them in the nests. The number of eggs may vary from ten to fourteen, according to their size and that of the hen which is to cover them.

## Preserving Eggs.

ED. MASSACHUSETTS PLOUGHMAN: Dear Sir: In an article on preserving eggs, you speak of water glass. Do they dip the egg into that solution which forms a coating over the shell?

B. F. TAFT.

Boston, Mass., Mar. 29.

You can find water glass at most of the city drug stores where it is sold under the name of silicate of soda solution. Any way to coat the eggs will answer. The usual way is to take perfectly fresh eggs, put them in a jar and pour the water glass over them.—ED.

## Poultry Notes.

A Massachusetts poultry grower asserts that no breed will lay so many eggs at the season when eggs are high priced as the Black Langshan.

Broilers begin to touch the highest quotations during April, often reaching forty cents a pound for best stock. They must be well fattened, yellow mottled, and well prepared for the market.

Ask a market man what breed of poultry he favors and as a general rule he will answer, the Plymouth Rock. In that term, however, he generally includes all the medium sized breeds of similar style, such as the White and Silver Wyandottes.

It may fairly be estimated that two Leghorns can be raised to laying age for the cost of one fowl of the large breeds. Hence the Leghorn raiser can keep his laying stock to full number at less cost than a grower of the large kinds. The cost of the keeping of the Leghorn is also less, and no doubt their eggs are produced at lowest possible cost.

That oldest of old-fashioned but practical fowls, the Dominique, is coming somewhat into fashion again. Its virtues have been somewhat obscured by their likeness to the Plymouth Rock. The main difference is that it is a somewhat smaller breed; and its plumage, although somewhat similar to the Plymouth Rock, is not quite so handsome. They are yellow-skinned, hardy, good layers and good for market poultry.

Farmers should improve their fowls by purchasing thoroughbred males or eggs from pure bred fowls, but if one undertakes to raise fine poultry, advertise and compete with the leading fanciers, he will most likely fail. It is not in his line. Most any one can learn to raise poultry for market and make money at it. Not so with the fancy business. It requires knowledge, perseverance and time. Leave this for those who make it a specialty, follow it in earnest and for life.

W. A. CROSBY.

## APIARY.

## Money in Bees.

How to dispose of the honey crop profitably is becoming a serious problem with most bee-keepers. Not many years ago it was easy to raise comb honey, ship it to some commission house in a near-by city, and realize three to twenty cents a pound for it. Now in many places most of the honey-producing timber is gone, and waste lands reclaimed and cultivated. These causes, with frequent poor seasons, render the honey crop uncertain; and, worst of all, comb honey in the cities is quoted seven to twelve cents.

Formerly I raised comb honey almost exclusively, and shipped nearly all of it to commission houses. But some years ago I unexpectedly had about a ton of autumn extracted honey to dispose of. Shipped to a commission house it would probably have netted four to five cents a pound, some time. I had never tried peddling honey, and was very much prejudiced against peddlers and peddling; but I wanted more for that honey. I loaded some of it into the wagon, put up in convenient packages for retailing and started, though with much trepidation. I knew a few rebuffs would send that honey to the city for what it would bring. But I sold honey at nearly every house, over 300 pounds the first day, and decided that peddling (honey at least) was not such bad business after all. Many neighbors and acquaintances had passed by frequently for years and seen the sign, "Honey for Sale," but never bought a pound of my honey, bought freely when it was carried to them. And they didn't buy afterward, either, unless I carried it to them and asked them to buy.

The ton of honey was soon sold at eight to eleven cents per pound, according to quantity wanted, and several thousand pounds more were bought and sold at a fair profit. Since that time I have raised mostly extracted honey, always retail it myself, and am getting the same prices now in these times of very low prices that I did ten years ago. Honey, if a good article, will sell itself almost anywhere, if given a fair chance. I have never found a place, in country or town, where it would not sell fairly well, any time of year, though in the fall is best in my experience, after the bulk of fruit is gone, and the many needs of the winter season have not yet taxed the pocket-book.

But I think I hear some one say, "I can't peddle;" or "I won't stop peddling!" Now, neighbor, stop a

**Hood Farm Jerseys**  
FOR SALE—Solid colored bull, 75 per cent of the blood of Merry Maiden. Dropped Aug. 2, 1897. Sire, Chromo, the sire of 8 in the 14 lb. list. Dam, Barretto, test, 16 lbs. 8 oz., dam of Spark, 20 lbs. 3 oz., full sister of Costa, 21 lbs. 8 oz., 12 and Chestnut, 16 lbs. 7 1/2 oz., dam of 8 in 14 lb. list. Write for price.  
HOOD FARM, Lowell, Mass.

## Join the Army



more cows use the LITTLE GIANT SEPARATOR. In either case they get all the butter fat the milk contains.

P. M. SHARPLES,  
Fig. 111.  
Omaha, Neb.  
Dubuque, Iowa.

minute, and listen. When I was young and green I tried "canvassing" for a book. For years after I had a horror of peddling. When I came to keep bees and had honey to sell, I would not even ask a merchant with whom I traded regularly to buy my honey. If any one but a commission man wanted any of it he had to ask for it. I am not a natural salesman, a poor talker—timid, diffident and easily rebuffed. I can, however, sell an average 100 pounds of honey a day in any fairly good farming country, and in villages and towns often much more. You will find selling your own honey different from selling books and notions. People will be glad to see you come. You need not lose one atom of your dignity, if it is of the self-respecting kind. If any one thinks any less of you for selling honey, provided you are polite and respectful, it will be some one whose opinion is not worth minding. Any one with a little tact and energy can dispose of 3000 to 5000 pounds of good extracted honey at fair prices, at odd times in fall and winter when time is not worth much, and much more can be sold by devoting more time to it.

Comb honey is not satisfactorily marketed, in my experience. It too easily gets to leaking, and is then messy, and not attractive. Sell comb honey only by the case if at all. Perhaps I may be pardoned for saying, in such an article as this, that I have for many years kept from 50 to 195 colonies of bees, and have raised and sold over 60,000 pounds of honey, and bought and sold much besides. I write facts learned in the dear but thorough school of experience, and not plausible theories.

First, secure a good article of well-ripened extracted honey, and so care for it that it will remain good. My ways of doing this differ from the usual ones; but I will not take time now to explain. Perhaps in some future article I may do so.

When we are ready to sell, if the weather is mild attach a sliding faucet to a five-gallon screw-cap tin can of honey; place the can on the wagon-seat, the dish to be filled on platform scales underneath, and weigh out any quantity wanted. It is usually most satisfactory at this time of year to let the purchaser furnish the dish, then there is no package to pay for in return.

Some writers have advocated selling not less than one dollar's worth when selling honey direct to consumers. I can't agree with them. A small sale often paves the way to a large one later, and it always pays to be accommodating and obliging; but I charge one cent per pound more for less than a dollar's worth.

In cold weather, when honey will not run readily, I put up honey in one, two, four and quart tin pails, and charge extra for the pails. Always, to every package sold, attach a neatly printed label, giving your name and address, and plain, simple directions for so caring for the honey that it may retain its good qualities until used. Dress neatly but plainly, like a farmer, not like a city man. Have everything neat, clean, and attractive.

Now we are ready, how shall we find buyers? Fill a net tin pail with honey, and label it. Call at every house—skip none. You will often make sales where you least expect it. When the door is opened, say, "I have some choice honey, please get a spoon and sample it." Right here is the main point. Get every one, if possible, to taste your honey. Most people have sweet teeth, and a taste of good pure honey puts them in good humor. Be very sure that the children, if present, have a taste too. If you don't know already that parents' hearts are very easily reached through their children, you will soon learn it. If a servant or child goes to consult the housekeeper about buying honey, see that the honey-pail and spoon go too. Twenty-four people out of twenty-five would say "no!" If asked if they wanted to buy extracted honey. If they taste first many will buy. Many are prejudiced against extracted honey. Perhaps some time they have had a poor article of extracted or strained honey, or, may be, they think the honey is bogus. I have many times had such people taste my honey and say, in a surprised way, "Why, that is good. That is genuine honey. What is the price?"

One lady said to me last fall, "I never buy extracted honey. I buy comb, then I know what I am getting." After she had been induced to sample the honey she found it good, knew it was genuine, bought some, and asked me to call again.

Don't annoy people by urging them to buy when they don't want to, and be invariably polite and pleasant whether they buy or not. You can easily make friends who will be glad to see you come again. Follow the same route every year, and your sales will increase each trip. You can go over the same ground as often as once in six weeks to advantage. I have many customers who at first bought lightly, or not at all, who now buy twenty to fifty pounds of my honey every season. One near-by town of about 2000 population has used over 1500 pounds of my honey this season up to February 1, and all autumn honey too. I seldom have any other kind in my present location. But there is little buckwheat, and the honey is mostly from goldenrod, fireweed, and Spanish needle. One pleased customer will often find others for you. In this way I have this season sent three five-gallon cans of honey to customers in Chicago, at nine cents per pound net. "Can't buy genuine honey in Chicago!" they say. A little ridiculous, isn't it?

Some one will ask if I have no competition in selling honey. Yes, but that doesn't matter much. There is plenty of room, and customers for all. Make a reputation for square dealing and selling a good article, and customers will wait for you. If some one undersells you, and gets some of your customers, never mind—there is a very large market almost entirely undeveloped.

Think of this matter, brother bee-keepers. Plan to raise a crop of good extracted honey next season, and then get all there is in it. Don't divide with transportation companies or middlemen. A crop of extracted honey is much surer than a crop of comb, and, in most localities, two or three times as great. Ask a fair price for your honey (all you can get in a fair price) and adhere to it. It is much easier to lower prices in a good year than to raise them in a poor one. If there is a large or small crop of grain or fruit, everyone knows it. Not so with honey.—H. D. Burrell, Covent, Mich., in *Gleanings in Bee Culture*.

## Experimenting in the Garden.

This year I had a few rows of celery that was planted late, and up to the middle of September it had a small growth. Under ordinary conditions, I knew the celery would not grow to a marketable size before cold weather. To force it into a more rapid growth, I decided to irrigate that part of the field with liquid manure, as an experiment. My water tank hold 100 barrels of water, and in one end is a slatted box for manure. This was filled with well rotted manure, which was renewed once a week. I kept the ground between the rows of celery thoroughly wet with manure water for about a month. The water as it ran through the pipes looked almost black; and at first I was afraid to use very much, but I found that it would not injure the plants if it was only applied around their roots, and did not come in contact with the foliage. In less than a week after I began to use the manure water I could see the color of the leaves change to a darker green. The celery was of the White Plume variety; before irrigation was begun the blanching boards were placed along the rows. I am now (Oct. 26) marketing the celery and find that the greater part are grown to full size, but the growth was not as rapid as it would have been earlier in the season under the same treatment. But the quality of the celery was superior to any that I ever tasted of this variety. The rapid growth had made it very tender and I had no trouble in selling it to my customers after they had learned about its quality, although there was plenty of larger celery offered that was hollow stalked or stringy. My experience is that if celery is allowed to remain in dry ground after it is blanched ready for use, that the stalks become hollow. In this section, where celery is grown for market, it does not often pay to set it out after the first of July, as there is not time after this for it to make a large growth, and if my late celery this year had been planted two or three weeks earlier I would have obtained a much larger growth and realized a considerable more from its sale. One thing I have learned from my experience this year is that it pays to mulch plants to retain moisture and save cultivation. I placed a mulch of straw and manure between some rows of strawberries I wished to irrigate. The mulch was placed close to the plants on each side of the row, leaving an uncovered space about six inches wide in which to run the water. A little furrow was made in this space with a hoe and the water started at the upper end of the row, and allowed to run until the ground under the mulch had become well soaked. The ground did not bake, and much less water was required for irrigation; but few weeds grew around the plants and the berries were kept clean. I am so well satisfied with my experiments in mulching that I think I shall try the plan on a large part of my garden. Last year I tried placing a mulch between some rows of celery and cauliflowers. I cultivated them three or four weeks after setting them out, or, until they were nearly half grown; then placed a

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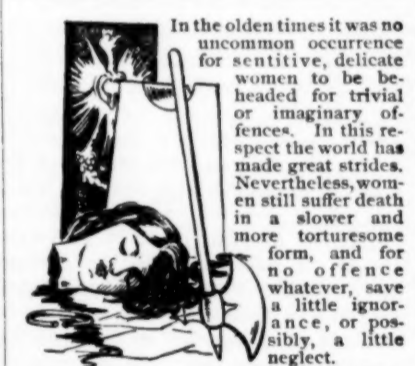
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much close to the plants on both sides of the row leaving about an eighteen-inch space in the middle to run the cultivator. I grew good crops by this plan and saved some work in weeding and cultivating. I think I shall try the plan another year in growing a bed of strawberries. After the plants have been set and cultivated about a month, I will place a narrow mulch about eight inches or ten inches wide on both sides of the row; leave a space in the middle for a narrow cultivator, and keep the runners all off except one or two which will be allowed to set in the rows. The mulch will keep down the weeds close around the plants, and until the weeds can grow up through it, I shall have so much less space to weed. I have now some very fine plants on a small place that I am trying the plan on this summer.

I have also made experiments in using different kinds of fertilizers in growing cabbages and cauliflowers. On one part of the field stable manure was used alone. On different parts some high grade fertilizers were used in around the plants in addition to the manure; on another part a heavy top dressing of ashes was given before setting the plants, and harrowed in, and fertilizer applied around the plant at the first and second hoeings. I have also used night soil around the plants, working it in with a cultivator, and on another plot commercial fertilizers alone. The results of these experiments are, that the stable manure in connection with fertilizers gave the largest growth of heads with many loose leaves. Where a-bes were used there were less loose leaves, and the heads were more solid but smaller. The heads where night soil was used were very large. The smallest where commercial fertilizers were used alone.—W. H. Jenkins, Delaware Co., N. Y., in exchange.



In the olden times it was no uncommon occurrence for a sensitive, delicate woman to be headed for trivial or imaginary offences. In this respect the world has made great strides. Nevertheless, women still suffer death in a slower and more tortuous form, and for no offence whatever, save that of being a little ignorant, a little ignorant, or possibly, a little neglectful. The woman who suffers from weakness and disease of the distinctly feminine organs, whether she realizes it or not, is being slowly but surely tortured to death. She suffers almost continually with sick headache. She has pains in the back, what she calls "stitches" in the side and shooting pains everywhere. She experiences burning and dragging down sensations. She becomes weak, nervous and despondent. She neglects her home, and is petulant with her husband. If she consults the average physician, there is not one chance in ten that he will hit upon the real cause of her trouble. He will attribute her bad feelings to stomach, liver, heart or nervous trouble. A woman in this condition should consult some eminent and skillful specialist who has had a wide experience. Dr. R. V. Pierce, for thirty years chief consulting physician to the "Invalids' Hotel" and "Surgical Institute," at Buffalo, N. Y., has, with the assistance of a staff of able physicians, prescribed for many thousands of women. He has invented a wonderful medicine for ailing women, known as Dr. Pierce's Favorite Prescription. It has stood the test for thirty years. It acts directly on the delicate and important organs concerned in wifehood and motherhood, making them strong and well. It allays inflammation, heals ulceration, soothes pain and tones and builds up the nerves. It transforms weak, nervous women into healthy, happy wives and mothers.

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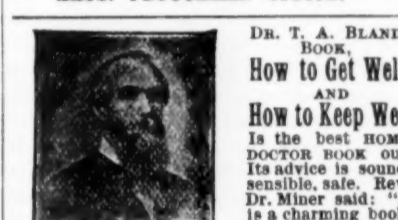
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would be cheap, but I have some feed at six dollars per ton that is as nutritious as hay. Of course your cattle must have some hay, but you can feed much less hay, and make up the required weight or bulk, with this feed. Sold in any quantity at 30 cents per 100 lbs., delivered at depot in Boston, the bags are ten cents each, returnable at same price, or you can send your own bags if you prefer. Will send you a trial lot of 300 lbs on receipt of one dollar, which will give a chance to see it and try it on your stock. I have a few small cars of 15 tons each for \$50, you to pay freight from Boston. These would not be quite as uniform in quality as those advertised above at six dollars per ton. I will refund \$10 for the bags if returned within 30 days, which will make the cost of 12 tons only \$40. Terms, cash with order. Better be quick and order a car of it. C. A. PARSON, 154 Commercial Street, Boston, Mass.

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# MASSACHUSETTS PLOUGHMAN

BOSTON, APRIL 16, 1898.

Persons desiring a change in the address of their paper must state where the paper has been sent as well as the new direction.

ONE can travel farther on a good trade than on a free pass.

SOME men who can set a good example fall when they try to set a speckled hen.

It is reported that the milk trust in New York having got the consumers in hand, is now preparing to put the screws on the farmers.

THE article on our third page on marketing honey, contains many suggestions which may be applied to the marketing of general farm produce.

THE bill introduced into the Massachusetts legislature providing that the road commissioners shall put all their time into the work looks very much like a slap at that organization.

A PRIZE of \$5 has been offered by Mrs. McBride for the best article on "How to prepare and serve vegetables and fruits for the family." The articles to be submitted to the committee on the Household Art department at the Massachusetts Fair next fall.

THE milk situation in Boston is as unsatisfactory as ever and there is great complaint, especially on account of the amount of deduction for surplus. If the contractors could be forced to make the small concession not to extend their milk trains any farther in the country the situation would gradually improve.

As the bill now stands the Massachusetts cattle commission will get \$65,000 in addition to the \$20,000 previously set aside for their use. The law enforced last year will be practically unchanged in its general operation, but Chairman Peters considers the sum voted too small to permit any very extended campaign this year.

THE tuberculosis campaign is evidently to be a minor feature in Massachusetts this year. The appropriations have been steadily cut down year by year from \$300,000 to \$65,000 until this year the committee on agriculture recommends only \$65,000 to the \$20,000 already voted. As the tuberculosis law remains about the same as last year, this small appropriation will not go far in paying for diseased cattle. It appears that the present legislature does not want the cattle commissioners to do much this year. The present elaborate cattle commission with its small appropriation is like a fifty horse-power engine set to driving a corn sheller. Either the commission should be put on a simple basis, as formerly, or it should have money enough to carry out the law as it was intended.

THE last PLOUGHMAN Farmers' Meeting of the season, held last Saturday, was a fitting close to the series of meetings held this year, and some fifty or sixty were present, in spite of the fact that farm duties were pressing. Mr. Stevens' essay, which we give very nearly in full in this issue, was a broad and comprehensive one, dealing largely with underlying principles, as well as giving the practical details of the subject in such a plain and direct way as to be helpful to even the most inexperienced. There will be found much in it to stimulate thought. One fact brought out in the essay we wish to emphasize, that in order that the world may advance in a knowledge of the science of agriculture and of the laws of nature, each individual investigator (such as every farmer and horticulturist should be) should be willing to impart to others such facts as he may have discovered in his own experience. The farmer has frequently been criticised because he has been willing to give so freely of his own knowledge to help his brother farmers, seemingly to the injury of his own business, but surely, as Mr. Stevens says, "the laws of nature should be secrets to none," and he who adds to the world's knowledge along this line is a benefactor. The helpfulness and hearty good will which is always manifested at the PLOUGHMAN meetings is one of their pleasantest features.

Just at this time, it seems to us fitting that we should express our appreciation of the many kindly words of commendation and encouragement that we have received both in person and by letter in regard, especially, to these meetings. It is a pleasure to feel that we are helping in this way to spread a broader knowledge of the principles and methods of agriculture, and to put the occupation of the farmer on the high plane where it belongs. The subjects of the meetings have been carefully chosen, the best speakers possible procured and the discussion have been free and open to all and although that privilege has been abused at times, we see no reason to change our attitude. It is a distinctive feature of the meetings that the speakers have, almost without exception, been practical farmers speaking to an audience of farmers, and the meetings have frequently been the means of bringing new speakers to the attention of the public, who have become recognized forces on the platform. We are formulating plans for our next season's series of meetings which promise to be as helpful as those in the past, if not more so. We cordially invite the co-operation and presence of all those interested, and would thank every one who has contributed to their success in the past.

## CURRENT TOPICS.

A sad event in the race for wealth which is going on in Alaska was the avalanche on the Dyea trail April 3, by which a much larger number lost their lives than was at first supposed. It is now believed that between fifty and one hundred men and women were killed and many of the bodies will never be recovered until the summer sun melts the tons of snow and ice which bury them from sight. There are two or three thousand men working in relays, shovelling away the debris, and some of those killed have been recovered and identified while others have been taken out alive, although seriously injured in many cases. It is estimated that 10,000 tons of outfits are buried under the snow and ice. The slide covered the trail for several hundred yards at a depth of fifty feet in many places.

The President's message on the Cuban question, which was delayed so as to give Gen. Lee and the Americans an opportunity to get safely away from Havana, was transmitted to Congress on Monday and while not satisfactory to the most radical, seems to offer a safe and effective middle course. It is quite a lengthy document giving the history of the revolutions that have convulsed the island, dwelling on the horrible character of the warfare practised, and the uncivilized methods used, detailing at considerable length the terrible condition of the unfortunate Cubans who had been driven in from the rural districts and kept within the bounds of the large towns, and outlining the efforts which the United States has made to relieve their distress. The President says the only hope of relief from a condition which can no longer be endured is the enforced pacification of the island, as under the present conditions, the only way it can be terminated is by extermination or exhaustion. He asks Congress to authorize him to take measures to secure the termination of hostilities in Cuba and to secure establishment of a stable government there and to use the military and naval forces of the United States as may be necessary for those purposes. He also asks for an appropriation to aid the suffering in the island. The grounds given by the President for armed intervention are humanity, to stop the barbarous and inhuman conflict; self-interest, our citizens being injured and their property destroyed, and the fact that in order properly to enforce the neutrality laws, we are compelled practically to keep on a war footing with a Power with which we are at peace. The President believes that intervention is already a fact, inasmuch as the United States has been feeding Spanish subjects.

In regard to a recognition of the Cuban government, the President considers that such a course would not be justified, and cites precedents which sustain his position. Forcible annexation he characterizes as criminal aggression. The loss of the Maine in Havana harbor occupies considerable space in the message and the President argues that this occurrence showed that Spain is not able to guarantee security to foreign vessels. Spain has disavowed any connection with that disaster and has offered to submit to arbitration all the differences which may arise from that affair.

The President added a paragraph to the message after it was completed to cover a new feature which had developed in the Cuban situation. On Easter Sunday, the Spanish Government, through its minister at Washington, delivered an important note to the State Department stating that the queen regent of Spain had commanded General Blanco to proclaim an armistice without conditions, that her majesty's Government had granted liberal institutions to the island of Cuba which the coming Cuban Parliament would develop. It recalls the condolence and sympathy expressed by the queen regent and her Government at the disaster of the Maine, and the horror this disaster had occasioned in Spanish hearts, and appeals to the courtesy and sense of justice of the United States Government to enlighten public opinion upon the attitude of Spain. This document was the official notification of the Spanish Government to the United States of the granting of an armistice, and its essential terms.

The President called this fact to the attention of Congress and left the issue with them, expressing himself as prepared to execute every obligation imposed upon him by the constitution and the law. In regard to the armistice, the President says: "If this measure attains a successful result, then our aspirations as a Christian, peace-loving people will be realized. If it fails, it will be only another justification for our contemplated action."

The President's message was received by Congress and referred in each branch to the committee on foreign relations. Action on the Cuban matter was delayed until after General Lee had reached Washington, so that more direct information might be obtained on the subject. On Wednesday, the committee on foreign relations in both senate and house reported resolution calling for immediate intervention by the United States and authorizing the use of the naval and military forces to secure peace and the independence of Cuba.

A minority report called for the recognition of the Cuban republic, although General Lee has said that such a course would greatly embarrass the United States.

THE bill appropriating \$180,000 for the gypsy moth has now passed both houses of the Massachusetts legislature. This sum is in addition to the \$20,000 already provided. And the moth killers may resume the campaign fully equipped with the sinews of war. "General" Forbush of the moth brigade is in high spirits over this legislative indorsement of the campaign.

## Washington News.

The one consuming topic here, as well, probably, as everywhere else during the week, has been war. Bankers, business men, travelling men, farmers—all have discussed the one uppermost theme, and to the exclusion, practically of everything else. With the discussion of war comes the natural query, what about the sinews of war—money—for war is of course expensive. A glance at the financial condition of the country shows that the United States has never before in its history been in such a condition to enter upon the immense expense of a war with a foreign country, necessitating as it does the expenditure of vast sums for offence and defence.

The money in circulation in the United States is to-day more than it has ever been heretofore. The Treasury figures show the money in circulation April 1, 1898, as \$1,756,058,000. This is \$246,300,000 greater than the amount in circulation at the date of the presidential nominations of 1896. Right in the face of the war, when property is supposed to shrink and money retire into hiding, our circulation is at high water mark and our circulation of gold coin is also greater to-day than at any previous date in the history of our nation. During the month of March, according to the government figures, the total increase has been \$29,681,986 and of that \$28,244,800 has been gold. With money thus plenty, the people are in better condition to supply money for war measures than ever before, whether through taxation or by loans to the government. At the commencement of the civil war, the money in circulation was only about \$350,000,000, or one-fifth of what it is to-day. The per capita circulation at that time—1862—was only \$10.96, according to the Treasury Department figures, while to-day it is \$23.69.

## A POPULAR LOAN.

It is thought by many that a popular loan would be eagerly accepted and subscribed by the people, bonds to be issued in small figures. Government bonds, drawing a low rate of interest are now selling far above their face value, even though running for comparatively short terms of years, showing that the average American is well satisfied to invest his earnings in government securities, and it is thought that a call upon the country for funds with which to meet war would be promptly and patriotically met from the exceptionally large sum of money now in circulation.

## THE NEW TARIFF.

While discussing the question of finances with which to meet war demands it may be well to look at the question of government revenue as relating to the new tariff law and see whether it is doing its duty, both in regard to supplying revenue sufficient to meet the running expenses of the government and its effect upon the great industries of manufacture and agriculture. Since the passage of the law, it has been steadily gaining ground. During the months of February and March, it may be said to have gotten fairly on its feet, producing sufficient revenue to more than meet the expenses of the government, under ordinary conditions, while the receipts from revenue were gratifying.

The following table shows the total receipts of the government since the passage of the law, a period of eight months the aggregate sum being some \$20,000,000 greater than that of the corresponding eight months of the preceding year.

August, 1897.....	\$19,923,614
September.....	21,933,098
October.....	24,391,416
November.....	26,138,995
December.....	27,931,494
January, 1898.....	26,735,227
February.....	28,572,638
March.....	29,377,260

But the thing of most interest to farmers in connection with the new law is its effect upon the importation and exportation of farm products of various kinds. A statement from the Treasury Department just issued showing the comparisons of January exports and imports with those of January of the preceding year gives some idea of the practical operations of the new law. During the month, the importation of live animals and articles of food was cut down \$3,200,000 as compared to the January of the preceding year. The importations of horses in January, 1898, under the new law amounted to \$10,978 against \$21,364 in January, 1897, under the old law. The exportations of horses, however, in January last amounted to \$562,140 against \$338,295 in January, 1897. The sheep importations in January, 1898 were \$19,265 against \$32,319 in January, 1897. The importations of barley in January last were only 16,030 bushels against 161,625 bushels in Jan., '97. The imports of oatmeal in Jan., '98, were only 3,470 pounds against 58,322 pounds in January, 1897, while the exports of oatmeal increased from 3,777,788 pounds in January, 1897, to 7,149,302 pounds in January, 1898. In chicory, the imports fell off from nearly a million pounds in January, 1897, to 3,055 pounds in January, 1898. Imports of hay were 9,344 tons in January, 1897, and only 86 tons during last January. And so on down the line with almost all agricultural products; the importations under the new law have been markedly less than they were under the old law, while in many cases the exportations of farm products have greatly increased in 1898 over those of 1897. The total January exportations of the products of agriculture amounted to \$79,045,101, which is an increase of \$12,000,000 over the exportations of January, 1897.

## AMERICAN HORSES.

Speaking of the exportations of American horses, special efforts are now being made by the Department of Agriculture to widen the European market for this farm product. It is believed that Germany and Belgium afford the best present market for horses, but the horses re-

quired are high bred. Excellent prices, however, will result. The export trade to Europe has very largely increased within the last year or two and the outlook is most promising, as European army officers are finding that American horses prove superior to all others in wind, limb and other desirable riding qualities, and the consequence is that they bring fancy prices. In our best horse raising states, the combination of pasturage and winter feed enable our breeders to keep their animals growing under the most satisfactory conditions the year around, so that we can successfully compete with the rest of the world in the matter of breeding good stock. Foreigners are finding this out. Last year 1,400 horses were entered at Hamburg from a single Pennsylvania exporting firm, on which the transportation charges were over \$50,000, so it can be seen that good prices were realized to warrant such a payment. The Germans and Belgians are using American horses more and more for drayage and breweries and even for pleasure driving, but Secretary Wilson believes that the most promising field is among army officers, who take special pride in the fine points of their horses.

GUY E. MITCHELL.

## Beacon Hill Notes.

The resolve for a forest survey of the state by the Harbor and Land Commissioners at an expense of \$4000, and the bill for the reclaiming and improving waste and unused lands and for preparing road construction material by prison labor were both reported favorably by the ways and means committee.

The committee on agriculture reported favorably a bill amending the laws relating to the suppression of tuberculosis among cattle, providing for the sale, under proper restrictions, of the meat of condemned cattle which prove to be only slightly affected with the disease.

The senate has substituted a wide tire bill for an adverse committee report.

The appropriation for \$33,000 for the state farm was favorably reported in the house.

The attorney-general has rendered a decision on the method of procedure adopted by the cattle commissioners in compensating the owners of cattle condemned as tuberculous and killed under the provisions of the law of 1895.

The question is whether the law requires the commissioners, or their agents to kill cattle and make a postmortem examination of them, to determine the extent to which they are afflicted, before agreeing with the owner as to their value, or whether they are authorized by law to agree with the owner as to their value when they condemn the cattle and before they kill them.

The attorney-general says there is nothing in the statute which requires a post-mortem examination before agreeing on its value or ascertaining the same by appraisal.

He sums up as follows: "It is therefore unnecessary to wait for the results of an autopsy before agreeing, or ascertaining by appraisal, for the purpose of payment, upon the value of an animal which the commission has adjudged to be diseased and has ordered to be killed."

## The Milk Question.

Vigorous methods are being adopted by the Milk Producers' Union to secure fair treatment for the milk producers of the state. The large majority vote of the Union, leaving the settlement of the whole matter in the hands of the directors, was good evidence of the confidence felt in their abilities. To define exactly what rights may be had through the courts, able legal counsel has been engaged to look up the questions at issue at once and also secure rates from all stations so that milk could be sold in can lots by the producers in the Boston market. Mr. Bowker's interview with Gov. Wolcott has led to the Board of Arbitration consenting to arbitrate on the difference between the producers and contractors. The date for the hearing has not, however, been set. The directors are making a brave and decided stand in this matter and in order that their efforts may be crowned with success, the members of the Union should be united in their support.

HERE in these days of warlike diplomacy and campaign plans the maneuvers of the Milk Producers' Association show a promising bit of diplomacy. In seeking to refer the surplus milk dispute to the state board of arbitration, the managers of the association have started out on an entirely new line. The whole question is who will carry the surplus, producer or contractor. If the board should decide that the contractors must pay full price for surplus milk the said contractors would promptly see new light in regard to extension of milk collecting routes. They would not be so anxious to get more milk if they were prevented from getting it at better prices.

A TRIP in the western states gives the impression that some farmers there know more about the currency question than they do about corn culture.

## Much in Little

Is especially true of Hood's Pills, for no medicine ever contained so great curative power in so small space. They are a whole medicine

# Hood's Pills

chest, always ready, always efficient, always satisfactory; prevent a cold or fever, cure all liver ills, sick headache, jaundice, constipation, etc. The only Pills to take with Hood's Serrapapilla.

## World Over.

—A severe earthquake shock has been felt in Bohemia.

—China proposes to open her interior waters to steam navigation.

—There are indications of a truce on the Manitoba school question.

—The British ship Ravenscrag has reached Callao, after being given up as lost.

—A slight conflict took place between Russians and Chinese at Kin-Chou, near Ta-Lien-Wan.

—At a street fight in Hong Kong United States and British sailors thrashed Russians, Germans and French.

—Queen Victoria and Emperor William have congratulated Sir Herbert Kitchener on his latest victory over the dervishes.

—A messenger from the ice-bound fleet of whalers near Point Barrow, Alaska, has brought a report of the great peril of the men imprisoned there and of his six months' journey overland.

## Read and Run.

—One thousand operatives at Fitchburg have struck.

—The Government report gives winter grain a high average.

—Americans may invest millions in the iron ore fields of Venezuela.

—The Maine guides have banded together to prevent poaching.

—The operatives have returned to the York cotton cloth mills at Saco, Me.

—Twenty-two cotton cloth mills at New Bedford were opened Monday.

—Two thousand miners in Massillon, O., district have been ordered to strike.

—A syndicate will try to control the British market for California canned fruits.

—Many Harvard students have taken up military drill at Cambridge, in the regular class.

—Two survivors of the crew of the ship Marlborough were rescued after being several days adrift.

—New York wheat traders suspect that Leiter of Chicago is selling wheat at a loss, or without profit.

—A knitting mill consolidation in New York is probable; the capital of the syndicate to be \$20,000,000.

—The first annual convention of the New England Federation of Weavers opened at Lowell, Monday.

—The whaling vessels now imprisoned in the ice at Point Barrow are expected to get out safely in the spring.

—The manufacturing interests of the country are reported as fairly steady, considering international conditions.

—New York Indians have won an old suit for nearly \$2,500,000 against the United States in the United States Supreme.

—A woman in Virginia is making money by raising sheep. She is a school teacher, and she has a home, with some acres of land which she had not time to cultivate, but which she wished to turn to account. She spent \$25, paying \$3 a head for ewes, and then turned her flock into her pasture land. She raised what she could care for on her land, selling the rest as soon as they were of marketable age. She gave only about one hour a day to them, and paid a boy fifty cents a week to keep the sheep sheds clean and the fodder cut up. She has been in the business about five years. The first year she came out \$40 ahead of her experiment. At the end of the fourth year she had a flock of sixty ewes, all she could keep with her pasturage, and in wool and mutton she found she had a clear yearly income of \$450.

## Country Real Estate.

The Keene farm in East Bridgewater has been sold to Frederick F. White. The price paid was \$5500.

H. A. Olmstead of Bolton has sold his twenty-one acre fruit, asparagus and poultry farm in the town to Silas W. Davis of Fitchburg.

Edward F. Green of Berlin has sold his thirty-nine-acre fruit and stock farm in that town to Julia A. Tarbox of Salem, N. H.

Joshua L. Moore of Northboro has sold his 114-acre stock and fruit farm in Northboro to a buyer whose name is withheld. The purchaser will make extensive improvements at once.

Among the recent sales of interest in Essex County are those of the Dudley Bradstreet farm and the Jordan farm properties in Topsfield, to Thomas E. Proctor of Boston. These estates are situated near the town line of Hamilton, and embrace about two hundred acres of tillage and upwards.

MASSACHUSETTS still leads the procession in the line of good roads, and the lead is apparently to be maintained. The appropriation in 1894 was \$300,000 which was vastly more than any other state devoted to the purpose. In 1897 the large amount of \$800,000 was voted. This year the amount is to be somewhat reduced, but it is still in the lead of many other states. An appropriation of \$600,000 is reported of which \$400,000 is to be spent in 1894. But the whole amount may be contracted for this year, although the other \$200,000 will not be paid until next year. Massachusetts is the pioneer in direct state road building and no division of state activity is more popular with the mass of the people. The roads are made in a thorough, substantial manner and the difference is quickly noted when a traveler meets a strip of road done by the state contractors. At the rate of recent appropriations, all the important places will before many years have state road connections.



### OSBORNE FARM IMPLEMENTS

The largest complete line of farm machinery manufactured by any single concern in the country.

**Osborne All-Steel Center Drive Plows,**  
**Osborne All-Steel Center Drive Harrows,**  
**Osborne All-Steel Center Drive Rakes,**  
**Osborne All-Steel Center Drive Mowers,**  
**Osborne All-Steel Center Drive Binders,**  
**Osborne All-Steel Center Drive Reapers,**  
**Osborne All-Steel Center Drive Threshers,**  
**Osborne All-Steel Center Drive Saws,**  
**Osborne All-Steel Center Drive Grains,**  
**Osborne All-Steel Center Drive Mills,**  
**Osborne All-Steel Center Drive Pumps,**  
**Osborne All-Steel Center Drive Engines,**  
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**Osborne All-Steel Center Drive Fuses,**  
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**Osborne All-Steel Center Drive Wires,**  
**Osborne All-Steel Center Drive Pipes,**  
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## MARKETS.

## BOSTON LIVE STOCK MARKET.

Cattle a shade lower.—Sheep steady.—Hogs as last week.—Veal calves 1-4 higher.—Milk cows all slowly. Horse market heavy in supply and values a trifle lower.

Reported for Mass. Ploughman.

Week ending April 13, 1898.

Amount of Stock at Market.

Cattle. Sheep. Hogs. Veal.  
This week, 5,002 2,272 205 30,383 1,884  
Last week, 4,702 2,314 87 28,080 1,816  
Per year ago, 5,304 10,068 289 30,109 2,008  
Horses.....660

CATTLE AND SHEEP FROM SEVERAL STATES

Cattle, Sheep.	Cattle, Sheep.
New York 13	Rhode Island 13
Massachusetts 227	Canada 808
Total.....5,002	2,272

CATTLE AND SHEEP BY RAILROADS, ETC.

Cattle, Sheep.	Cattle, Sheep.
Chicago 8,047	Eastern 211
Lowell 55	R. M. 1
S. A. 1072	Foot & boats, 80
Total.....5,002	2,272

Values on Northern Cattle, etc.

Per hundred pounds on total weight of calves, fat and meat, extra, \$3.25 to \$4.00; first quality, \$3.75 to \$4.50; second quality, \$3.25 to \$3.75; third quality, \$2.75 to \$3.25; a few choice single pairs, \$4.00 to \$4.50; of the poorest, single, \$2.00 to \$2.50.

Working Oxen.—\$6.00 to \$10.00; heavy steers, \$5.00 to \$6.00; or much according to the value for beef.

Cows and Young Calves.—Pair quality, \$2.00 to \$3.00; extra, \$4.00 to \$5.00; fancy milch cows, \$5.00 to \$6.00; and dry, \$2.00 to \$3.00.

Stores.—Thin young cattle for farmers; yearlings, \$3.00 to \$4.00; two-year-olds, \$1.25 to \$2.00; three-year-olds, \$2.00 to \$3.00.

Sheep.—Per pound, live weight, 2 1/2 to 3 1/2 cts.; 3 1/2 to 4 cts.; 4 to 4 1/2 cts.; 4 1/2 to 5 cts.; 5 to 5 1/2 cts.; 5 1/2 to 6 cts.; 6 to 6 1/2 cts.; 6 1/2 to 7 cts.; 7 to 7 1/2 cts.; 7 1/2 to 8 cts.; 8 to 8 1/2 cts.; 8 1/2 to 9 cts.; 9 to 9 1/2 cts.; 9 1/2 to 10 cts.; 10 to 10 1/2 cts.; 10 1/2 to 11 cts.; 11 to 11 1/2 cts.; 11 1/2 to 12 cts.; 12 to 12 1/2 cts.; 12 1/2 to 13 cts.; 13 to 13 1/2 cts.; 13 1/2 to 14 cts.; 14 to 14 1/2 cts.; 14 1/2 to 15 cts.; 15 to 15 1/2 cts.; 15 1/2 to 16 cts.; 16 to 16 1/2 cts.; 16 1/2 to 17 cts.; 17 to 17 1/2 cts.; 17 1/2 to 18 cts.; 18 to 18 1/2 cts.; 18 1/2 to 19 cts.; 19 to 19 1/2 cts.; 19 1/2 to 20 cts.; 20 to 20 1/2 cts.; 20 1/2 to 21 cts.; 21 to 21 1/2 cts.; 21 1/2 to 22 cts.; 22 to 22 1/2 cts.; 22 1/2 to 23 cts.; 23 to 23 1/2 cts.; 23 1/2 to 24 cts.; 24 to 24 1/2 cts.; 24 1/2 to 25 cts.; 25 to 25 1/2 cts.; 25 1/2 to 26 cts.; 26 to 26 1/2 cts.; 26 1/2 to 27 cts.; 27 to 27 1/2 cts.; 27 1/2 to 28 cts.; 28 to 28 1/2 cts.; 28 1/2 to 29 cts.; 29 to 29 1/2 cts.; 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## THE HOUSEHOLD.

## BABY'S LOGIC.

To-day I asked my mamma if I could whistle, Yes, I did.  
"Oh, no, my little girl," she said, "you're too little, you can't whistle."  
But Tom stepped so hard right on my toe  
She said, "Oh, you're too big a girl to cry out so."  
Why can't I cry if I am little,  
Or, if I'm big why can't I whistle?  
—St. Louis Republic.

## An Egg-Shell Garden.

Little Kate Sanford came running into the house in great haste.  
"Mamma, will you save me all your egg shells for a week?"  
"Abbie's got a new notion," said grandma.  
"Yes, but I think you will like this notion, granny. Will you, mamma?"  
"What will the biddies do for shell material?"  
"We'll pound up some bones for them," said papa, who always favored his little daughter in all her plans.  
"Teacher told me that how she once grew a flower garden in egg shells, and we are all going to try it. O, won't it be fun," said Kate dancing around and clapping her hands. "You are to break the egg open at the small end, and lay each shell away by itself; then I will make a pin hole in the other end for the water to run away if I should get the dirt too wet."  
"How will you make them set up, daughter?"  
"Oh, yes, I forgot about that. I must get a raisin or herring box, and have papa open it at the side so as to make a wide, shallow box, then we'll put some nice, yellow sand in it, fill the shells with nice, rich dirt, and press them down in the sand so they will stand up all right. Then I will plant some pansies, and verbena, and asters and other seeds and let them grow in the shells. When they are large enough mamma and I will put them out in the garden or in large pots."

Her papa thought that would be very nice, and promised to get the boxes for her. Her mamma decided she would also have a garden of vegetables started in the same way, and grandma began to wonder if she couldn't have a hand in the fun, too.

The next week Kate and her mamma each had an egg-shell garden, and grandma had the funniest one of all. She crocheted some little sacks out of thread just large enough for each to hold an empty shell, filled the shells with soil, planted some flaxseeds and hung one above the other in the window. How those plants did grow.

Kate's flowers were soon ready to transplant, mamma's tomato and cucumber plants were ready for the ground before the garden was plowed, and grandma's flax had grown into the daintiest vine with little blue flowers on it. The shell baskets looked like little fairy cups, and Kate almost wished she had thought of planting the flax instead of flower seeds. Grandma saw her admiring it one day, and the next morning when she started for school grandma gave her a neat box to carry, telling her not to turn it wrong side up. She was to hand it to the teacher.

Tom was cross. There was not the least doubt about it. He was very cross and all because Maggie had told him that if he wanted something to eat he must take gingerbread, "it was good enough for anybody." He wanted pie, and because he could not have it, he bounced into the barn where Charley was playing and sputtered and scolded. He said he was mad.

"Say, Tom," said little Charley after a short pause, "did you know that grandma was a little boy once, O' ever and ever so many years ago? I guess two or three hundred years."

"Fool! Yes," answered Tom who was eight years old, and so of course very wise. "Course grandma was a boy or how could he be a man, now? But goosie, men don't live two or three hundred years," and Tom swung his feet to and fro from the bench where he sat, whittling a bit of shingle into an oar for the cucumber boat floating in a tub of water.

Charley felt subdued, but he had more to say. "He told me, today, about some of the things he did when he was a little feller. He said he had a lot of brothers and sisters and they were poor, and he had to work awful hard and only wore shoes Sundays. He said his mother did not let them leave a lot of nice food on their plates to once, but they had to eat every bit up before they could have any pie—an' he said that Thanksgiving day they had boiled dinner and then turkey, an' his pa said that the one who ate the most boiled dinner could have the most turkey." "Just 'sposin'," interrupted Tom, who dearly liked turkey—"I call that mean; 'course they couldn't have room for much turkey after was one stunk, guess they wouldn't catch one more'n once that way," and he shook his head indignantly. Charley had an interested listener at last. He continued: "They had crackers when they wanted a lunch—dry crackers, no sugar nor butter, just crackers. Sometime the older boys would go and get crackers and butter, without asking, and poor little grandma thought if he could only have crackers and butter, too, he should be happy enough! He thought of it all night he thought he could not stand it any longer. That was one night when his father and mother went to meeting. He waited till the rest of the children were in bed and asleep, then he got up and went down stairs, and he was so quiet, without any light, and into the pantry. He knew where the crackers and butter were kept, an' he didn't wish to 'sturb any one, so he crept along, feeling his way, took a cracker, spread it thick—just all he wanted, and then he took just the biggest bite he could get into his mouth, but mercy sakes! What do you 'spos was the matter? Some one had put a plate of lard where they kept the butter, an' he had taken a big mouthful of lard instead of butter! My! wa'n't he a sick unit! Said he never has wanted cracker an' butter since—don't like to think of it, very well." The boys made wry faces. "Say, Charley," said Tom, "Maggie makes awful good gingerbread. Go and swipe some. Get some for me, too."

C. E. G.

For the MASS. PLOUGHMAN.

HOW GRANDFATHER GAINED HIS POINT.

That is grandfather's house. Doesn't it make a pretty picture? Those maples shading it, and that grassy slope before it with the stone walls curving up from the road to the front door give it such an inviting look. Then it is so prettily situated on that rising ground, with hills all about it not far away. See how very neat and nice everything is kept. That has been a characteristic of the old place ever since I can remember.

Now notice the front windows. Do you see there are two on each side of the front door? Did you ever hear the story connected with them? Well, it seems that when grandfather was born there a century ago, the house was not as large as it is now, neither was it as nice, for he could live in the door and see the stars through the chinks in the roof. When he grew to manhood, he stayed in the old place, though the other children went away one by one to seek new homes for themselves. After a time, he began to keep company with a rosy checked woman who lived in a neighbor-

ing farmhouse, and in due time the wedding day was set.

Now the old gentleman, great-grandfather, had given grandfather permission to build an addition to the old house, to accommodate the young bride. You see, originally, there was a room on only one side of the front door. Grandfather was going to build one on the other side, and it was quite a piece of work, too, for a large rock was just in the way of the new room, but he went to work in earnest, and with help, he removed the rock and had the frame up and well under way. He had decided to put two front windows in the new room, and as there was only one window in the corresponding space in the old part, he asked his father to let him put another window in the old room; but the old gentleman was attached to old things and didn't want any change made there, and grandfather must be thankful that he was allowed to make any additions to a house which had always been large enough before. Nothing would move the old gentleman, so, seeing it was useless, grandfather gave up saying anything, and kept on at work; but he was trying to think, all the time, of some scheme that would enable him to have his own way.

He kept his own counsel and worked on, forming plans meanwhile, until one day, he brought the oxen around to help him place some large, flat stones, as door steps. While not using the oxen, he fastened them to the frame of the old door and worked busily about, here and there, until just the right moment, when he went around suddenly in front of the oxen and flapped his green jacket in their eyes. They were so frightened, they gave a great plunge down the road, and crash went the door frame, and along with it, the whole front of the old room. Grandfather rushed after the oxen, and the old gentleman stormed and fumed. But, of course the deed was done, and the old front would have to be rebuilt. Grandfather was very sorry the oxen should have so misbehaved, and offered to rebuild, and the old gentleman, seeing that the old one was torn away, let grandfather rebuild to correspond with the new.

That is the way the two windows were put on each side of the front door, and though I must admit that grandfather was quite smart, I can hardly say that I quite like the way he gained his point.—Phil.

Sometimes, when all life's lessons have been learned,  
And sun and stars forevermore have set,  
The things which our weak judgments here have spurned,  
The things o'er which we grieved with lashes wet,  
Will flash before us, out of life's dark night,  
And stars shine out in deeper tints of blue;  
And we shall see how all God's plans are right,  
And how what seemed reproof was love made true.

But not today. Then be content, poor heart! God's plans like lilies pure and white unfold; We must not tear the close-shut leaves apart; Time will reveal the calyxes of gold. And if, through patient toil, we reach the land Where tired feet, with sandals loosed, may rest,  
Where we shall clearly see and understand,  
I think that we will say, "God knew the best!"

For the MASS. PLOUGHMAN.

Grandpa's Queer Lunch.

Tom was cross. There was not the least doubt about it. He was very cross and all because Maggie had told him that if he wanted something to eat he must take gingerbread, "it was good enough for anybody." He wanted pie, and because he could not have it, he bounced into the barn where Charley was playing and sputtered and scolded. He said he was mad.

"Say, Tom," said little Charley after a short pause, "did you know that grandma was a little boy once, O' ever and ever so many years ago? I guess two or three hundred years."

"Fool! Yes," answered Tom who was eight years old, and so of course very wise. "Course grandma was a boy or how could he be a man, now? But goosie, men don't live two or three hundred years," and Tom swung his feet to and fro from the bench where he sat, whittling a bit of shingle into an oar for the cucumber boat floating in a tub of water.

Charley felt subdued, but he had more to say. "He told me, today, about some of the things he did when he was a little feller. He said he had a lot of brothers and sisters and they were poor, and he had to work awful hard and only wore shoes Sundays. He said his mother did not let them leave a lot of nice food on their plates to once, but they had to eat every bit up before they could have any pie—an' he said that Thanksgiving day they had boiled dinner and then turkey, an' his pa said that the one who ate the most boiled dinner could have the most turkey." "Just 'sposin'," interrupted Tom, who dearly liked turkey—"I call that mean; 'course they couldn't have room for much turkey after was one stunk, guess they wouldn't catch one more'n once that way," and he shook his head indignantly. Charley had an interested listener at last. He continued: "They had crackers when they wanted a lunch—dry crackers, no sugar nor butter, just crackers. Sometime the older boys would go and get crackers and butter, without asking, and poor little grandma thought if he could only have crackers and butter, too, he should be happy enough! He thought of it all night he thought he could not stand it any longer. That was one night when his father and mother went to meeting. He waited till the rest of the children were in bed and asleep, then he got up and went down stairs, and he was so quiet, without any light, and into the pantry. He knew where the crackers and butter were kept, an' he didn't wish to 'sturb any one, so he crept along, feeling his way, took a cracker, spread it thick—just all he wanted, and then he took just the biggest bite he could get into his mouth, but mercy sakes! What do you 'spos was the matter? Some one had put a plate of lard where they kept the butter, an' he had taken a big mouthful of lard instead of butter! My! wa'n't he a sick unit! Said he never has wanted cracker an' butter since—don't like to think of it, very well." The boys made wry faces. "Say, Charley," said Tom, "Maggie makes awful good gingerbread. Go and swipe some. Get some for me, too."

C. E. G.

For the MASS. PLOUGHMAN.

HOW GRANDFATHER GAINED HIS POINT.

That is grandfather's house. Doesn't it make a pretty picture? Those maples shading it, and that grassy slope before it with the stone walls curving up from the road to the front door give it such an inviting look. Then it is so prettily situated on that rising ground, with hills all about it not far away. See how very neat and nice everything is kept. That has been a characteristic of the old place ever since I can remember.

Now notice the front windows. Do you see there are two on each side of the front door? Did you ever hear the story connected with them? Well, it seems that when grandfather was born there a century ago, the house was not as large as it is now, neither was it as nice, for he could live in the door and see the stars through the chinks in the roof. When he grew to manhood, he stayed in the old place, though the other children went away one by one to seek new homes for themselves. After a time, he began to keep company with a rosy checked woman who lived in a neighbor-

ing farmhouse, and in due time the wedding day was set.

Now the old gentleman, great-grandfather, had given grandfather permission to build an addition to the old house, to accommodate the young bride. You see, originally, there was a room on only one side of the front door. Grandfather was going to build one on the other side, and it was quite a piece of work, too, for a large rock was just in the way of the new room, but he went to work in earnest, and with help, he removed the rock and had the frame up and well under way. He had decided to put two front windows in the new room, and as there was only one window in the corresponding space in the old part, he asked his father to let him put another window in the old room; but the old gentleman was attached to old things and didn't want any change made there, and grandfather must be thankful that he was allowed to make any additions to a house which had always been large enough before. Nothing would move the old gentleman, so, seeing it was useless, grandfather gave up saying anything, and kept on at work; but he was trying to think, all the time, of some scheme that would enable him to have his own way.

He kept his own counsel and worked on, forming plans meanwhile, until one day, he brought the oxen around to help him place some large, flat stones, as door steps. While not using the oxen, he fastened them to the frame of the old door and worked busily about, here and there, until just the right moment, when he went around suddenly in front of the oxen and flapped his green jacket in their eyes. They were so frightened, they gave a great plunge down the road, and crash went the door frame, and along with it, the whole front of the old room. Grandfather rushed after the oxen, and the old gentleman stormed and fumed. But, of course the deed was done, and the old front would have to be rebuilt. Grandfather was very sorry the oxen should have so misbehaved, and offered to rebuild, and the old gentleman, seeing that the old one was torn away, let grandfather rebuild to correspond with the new.

That is the way the two windows were put on each side of the front door, and though I must admit that grandfather was quite smart, I can hardly say that I quite like the way he gained his point.—Phil.

## THE HOME CORNER.

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By special arrangements with the HAZARD GLOVE-FITTING PATTERNS CO., we are able to supply our readers with the *Best Glove Fitting Pattern* at a very low cost. It is acknowledged by every one that these patterns are the simplest, most economical and most reliable patterns published. Full directions accompany each pattern, and our lady readers have been invariably pleased with them in the past. The coupon below must accompany each order, otherwise the pattern will cost the full price.

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Enclose ten cents to pay expenses.



7335-Ladies' Shirt Waist Sleeves.

Many of last season's shirt waists are quite up-to-date with the sole exception of the sleeves. The pattern here shown is especially designed to remedy just such defects and includes the latest styles, one sleeve showing pleats, the other gathered at the arms edges. Both are one-seamed. Both are in regulation shirt style and with them are included the two prevailing cuffs, one straight, the other rolled over and rounded at the outer edges. To make either these sleeves for a lady of medium size, 1-1/2 yards of material 30 inches wide will be required. The pattern, 7335, is cut in medium size only. With coupon, 10 cents.



No. 7327-Ladies' Waist.

Much as bayadere stripes are worn, plaid silks share the honors for the various separate waists, whether they take the blouse form or are made in regulation shirt style. The model shown is in rich mixed colors, with lines of black, the vest, revers, collar and cuffs being of plain colored taffeta which matches the prevailing tone. The foundation is a fitted lining which closes at the centre front, but the blouse itself includes shoulder and under-arm seams only. The narrow vest is attached to the right side beneath the front of the blouse and hooks well into place beneath the left edge and revers. The sleeves are one-seamed and in regulation shirt style and are finished at the wrists with turn over cuffs fastened with silver links. At the neck is a collar of the plain silk finished with turn-over points and worn with a tie of the same. At the waist is a belt of black leather, with buckle and ornaments of steel, and with the blouse is worn a hat of rough straw trimmed with ribbon, lace and aigrettes. To make this waist for a lady of medium size 4-1/2 yards of material 22 inches wide will be required, with 5-8 of a yard for vest and revers. The pattern, 7327, is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure. With coupon, 10 cents.

The gored skirt is not by any means out of fashion; indeed, many dress-makers prefer it to any other, and it is used on all the plain tailor gowns says the Harper's Bazar. It is made the season with five or seven gores, and generally what is called a drop skirt, this meaning that it is separate from the lining excepting at the band, where it is put in with it. The way in which it is made is very simple when once understood. The lining is finished precisely as any dress skirt would be, with a facing and, as a rule, a band of haircloth, and finished with a ruffle or a piece of velvet binding. If it is to be worn over a stiff, carefully made silk petticoat, the haircloth is omitted, and the ruffle is a very deep one, and is accented with a row of buttons. The skirt of the material of which the gown is made, is somewhat wider than the lining; at the foot it is finished with a hem or facing which is blind stitched, and generally has ruffles, braid or flounces sewed on it. It is only fastened to the lining at the band. Of course it is best to have silk lining; but where it is not possible then a good quality of pretine or cau-

bric can be used, and a silk facing of some depth put on the outside of the skirt; this will make it possible to wear even with a silk gown.

When the material and the lining are made together they are sewn together in all the seams, and the skirt is then bound and faced. Some materials which stretch and pull are better made up in this way, particularly when the circular skirt is used as a pattern. The gored skirts will be used in wash materials, particularly in denim, homespun, and linette. When they are used for cambric they will be made narrower, and for ruffled and flounced skirts they will also require to be cut narrower.

Miss S. Maria Elliott gave a practical lecture at the Women's Educational and Industrial Union recently on "The Biology of the House," leaving out the human and plant life, however, and devoting the hour to causes and cures of animal pests. She began with rats and mice, saying that the remedy in this case, as in all others, is in the absence of stray food and moisture where they abound. The absence of favorable reproduction and the actual destruction of living forms are important parts of the plan of extermination, she said.

Miss Elliott, as reported in the Transcript, spoke of the necessity of having all apertures and pipe connections in the cellar cemented or filled with broken glass and then made tight. Cotton wool and cayenne pepper will keep these troublesome little creatures from following the pipes into bath or sleeping rooms. Stiff dough will often tempt them into a trap when toasted cheese and meat fail. Poisons should be used with great care. The moth, that small and insignificant member of an interesting family, could not be expected to commend itself to the housewife. Even Job speaks of "a garment that is moth-eaten," so it is of no new origin. To perpetuate its species is its only mission in the world and it dies only when this is accomplished. Absolute cleanliness, freedom from dust and other organic dirt, are the chief methods to exterminate it. It seldom attacks surfaces that are often agitated. When garments are put away they ought to be thoroughly brushed and cleaned after hanging in the sunshine for hours. A coarse comb is good to clean fur. Strong odors affect the delicate breathing apparatus of insects, therefore articles are sealed in boxes where there are cedar shavings, camphor sewed in bags or sealed in boxes, and are generally safe.

Tarred paper is good to fold blankets in. When moth appears around a carpet, the edges should be turned back and pressed with a hot iron. If the whole surface is attacked it should be cleaned with kerosene, naphtha or turpentine, but great caution is necessary with these inflammable fluids. Buffalo bags were unknown twenty-five years ago. They are neither bug nor moth but a beetle and it touched them "play possum." Cracks in the floors filled with plaster of paris may keep them away, but incessant watchfulness and a war on each individual of the species must be carried on. Crickets are sometimes very annoying and flies are certainly a pest. Early screening is a preventive for the latter; even the tops of the chimneys ought to be covered with fine netting. These precautions will also keep out wasps. The "thousand-legged," as it is called, might be called a leger, as it feeds on flies, moths and roaches. They bite, however, and hide away between bed clothing. They are near relatives of the centipede, but not nearly so dangerous. The oil pennyroyal is almost certain to keep mosquitoes away. They, like flies, carry contagion.

But the most disgusting pest of all, often brought to the house from street cars or in new furniture, is the "hardest to be rid of," said Miss Elliott. "Their appearance may not show any lack of cleanliness and the wonder is that city houses are so free from them. Their appearance is excusable; their continued presence is not. Every egg must be destroyed, for it means hundreds of adult bugs. Boiling water with soapuds is excellent to wash furniture thus infested, and kerosene or naphtha will destroy the eggs. If they get under wall paper or in books, nothing will dislodge them but a fumigation of sulphur. Corrosive sublimate, in successive applications for a week, has been tried with good success." The lecture closed with a chapter on water-bugs and the animals found in grains and dry foods. "The housewife," said

the speaker, "is fortunate in having the constant aid of scientific experimenters, and even the United States Government to aid her in combined efforts to exterminate insect pests."

A dainty holder for the towel and wash-rag, so necessary to the completeness of a bedroom, can be fashioned very simply and with little cost, as follows is an exchange:

A couple of wooden towel rings about one-eighth of a yard in diameter, and about three yards of ribbon of any preferred width from one inch up, will be required. The towel rings, for such they are called, can be found under this name at the notion counter of almost any dry goods store.

Cut your ribbon in three pieces—three-quarters yard, one yard, and one and a quarter yard in length, the piece three-quarters of a yard in length being for the bow and the other two to hold the rings.

Slip the one yard length under one ring and bring the two ends of ribbon together; slip the three-quarters length under the other ring and likewise bring the two ends of ribbon together. Now, place the ends of the first over the ends of the second piece of ribbon and sew securely together, over which also sew your daintily made bow, with a loop underneath for the hanging up process.

The upper ring, which is for the wash-rag, will rest lightly against the lower ring (for the towel), thus preventing the dampness of the wash-rag, in case it should be wet, from soiling the wall, as the holder is tacked up beside the wash-stand, or any preferred place.

This dainty arrangement is a decided acquisition to a bedroom, and has already graced more than one, being not only very ornamental but useful as well.

The following recipes from the Harper's Bazar may be depended on:

**Veal Olives.**—Cut small pieces of veal as if you were going to make cutlets, and spread them on a table. Make seasoning of crumbs of bread, pepper, salt, and sweet herbs that are agreeable. Strew the seasoning on the meat, roll them up, and tie them. Put a little butter in your saucepan, and when it is quite hot drop in the veal balls, or olives, which have been dusted with flour. Stir gently until light brown and until thoroughly done. Add enough boiling water to make a little gravy; a little lemon juice, and Madeira or sherry may be added.

**To Preserve Strawberries Whole.**—Select the finest and largest strawberries, with the stalks on, before they get too ripe. Lay them on a dish. Beat and stir twice their weight in double-refined sugar, and sprinkle over them. Take a few of the ripest strawberries, crush them, and put them in a jar with their weight in sugar. Beat and crush very small, cover close, and let them stand in a kettle of water until they are soft and the syrup has come out of them; then strain through a muslin bag into a pan, boil, and skim well, and when cold put in your whole strawberries, and set them over a slow fire until they are milk-warm, and let them stand until quite cold; set them on again and make them a little hotter; do this several times until they are quite clear, but do not allow to boil, as it will bring away the stalks. When the strawberries are quite cold, put them into jelly-glasses with stems down; fill the glasses up with the jelly; cover with paper dipped in brandy, and seal.

**Molasses Pudding.**—One cup of chopped suet, one cup of molasses, one cup of sweet milk, one cup of chopped raisins, one spoonful of salt, one dessert-spoon of soda, three and one-half cups of flour—enough to give the consistency of gingerbread—one-half cup of butter and sugar. Flavor to taste. Steam for four hours, keeping the pot filled with boiling water. Serve with hot or cold sauces, or the following lemon-sauce: One lemon (juice and grated rind), one piece of butter (size of an egg), one tea-cup of sugar, one egg, two tablespoonfuls of water. Let come to a boil, and serve hot.

**Spring Cleaning.**—If one ounce of quicksilver is beaten up with the white of an egg to a stiff froth, be applied with a feather to the cracks and corners of bedsteads, it will keep them entirely free from insects during the hottest weather. Before applying the quicksilver, the bedsteads must be washed with cold water and soap, and dried.

## THE SECRET OF A GOOD DISPOSITION.

Mrs. Pinkham Says a Careful Regard for Bodily Health Makes Women Sweet and Attractive to All.

The world is filled with sweet women who are held back from usefulness by some trouble of the female organs.

Fretfulness and nervousness rapidly destroy sweet dispositions. Sickly all-worn-out women cannot live happy lives. Nearly every woman may be well and happy if she will follow Mrs. Pinkham's advice.

See what Mrs. Craig says: "I have taken Lydia E. Pinkham's Vegetable Compound and think it is the best medicine for women in the world. I was so weak and nervous that I thought I could not live from one day to the next. I had prolapsus uteri and leucorrhoea, and thought that I would die. I had dragging pains in my back, burning sensation down to my feet, and so many miserable feelings. People said that I looked like a dead woman. Doctors tried to cure me, but failed. I had given up when I heard of the Pinkham medicine. I got a bottle. I did not have much faith in it, but thought I would try it, and it made a new woman of me. I wish I could get every lady in the land to try it, for it did for me what doctors could not do."

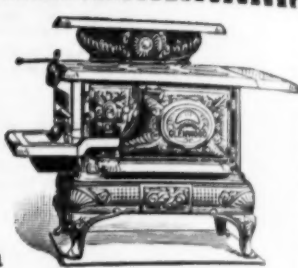
—Mrs. SALLIE CRAIG, Baker's Landing, Pa.

That Lydia E. Pinkham's Vegetable Compound is a safeguard of woman's health is clearly proven by the thousands of letters constantly being received. Here is one from Mrs. W. P. VALLEY, 506 Ferry Ave., Camden, N. J.: "DEAR Mrs. PINKHAM:—Before writing to you I felt very bad, had terrible sick headaches, no appetite, gnawing pain in stomach, pain in my back and right side; was tired and nervous, and so weak I could scarcely stand. I was not able to do anything, had sharp pains all through my body. Before I had taken half a bottle of Lydia E. Pinkham's Vegetable Compound, I found myself improving. I continued its use until I had taken four bottles, and felt so well that I did not need to take any more. I am like a new person."

Ask Mrs. Pinkham's Advice—A Woman Best understands a Woman's Ills

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### Boston Cooking School.

All ingredients mentioned in the following recipes are measured level.

The lesson at the Cooking School Wednesday morning, April 13, included the preparation of food in a variety of ways, especially adapted to the spring season, when the heavier class of foods should be omitted from the diet. Asparagus Soup, Stuffed Crabs with Mushrooms, Cold Chicken with Vinaigrette Sauce, Jellied Chicken, Cheese Sandwiches and Italian Sherbet were prepared and served.

**ASPARAGUS SOUP.**—Wash one can asparagus, add two cups cold water, and boil five minutes. Drain, add three cups water and one slice onion, and cook twenty minutes. Rub through a sieve, and bind or thicken with four table-spoonfuls butter and five table-spoonfuls milk. Add two cups scalded milk, salt and pepper, and a few of the tips. This soup is especially suitable for spring use.

**STUFFED CRABS WITH MUSHROOMS.**—Cook one slice onion in two table-spoonfuls butter three minutes; remove onion and add three table-spoonfuls flour; pour on one cup milk cream. Add the meat from six crabs and one cup mushrooms cut or broken in small pieces, one teaspoonful salt, one-half teaspoonful paprika, one-half teaspoonful lemon juice and the mashed yolk of four hard-boiled eggs. Fill the shells with the mixture, cover with buttered crumbs and bake until the crumbs are brown.

Hard shell crabs were used for this, being in season in winter, the soft shell in spring and summer. When soft shell crabs are for sale at "bargain" prices, they are usually what is called "sleepy," and not as satisfactory to use. To clean the crab, remove the claws, turn back the tapering points found on each side of the shell, and remove the spongy substance or lungs underneath. Turn the crab over and remove the "apron," or small, pointed piece at the lower part of the shell. Take out the crab meat and with a sharp knife cut around the edge of the shell until it is smooth and regular in shape, using the shells to bake the mixture in. Either fresh or canned mushrooms may be used. If fresh, rinse, remove the stems, rejecting any tough ones, and break the mushrooms in pieces. From a quarter to a half pound of mushrooms will be necessary for a cupful. Allow from one-fourth to one-third cupful melted butter to one cupful of crumbs.

**CALF'S BRAINS.**—Soak the brains one hour in cold water, then boil one-half hour with two slices of onion, a bit of bay leaf, a sprig of thyme and ten peppercorns. Serve with the sauce given below.

They may be put into cold water after boiling to help them keep their shape, but should be re-heated for serving. The first soaking in cold water is to draw out the blood. Many people would not be attracted by the thought of calf's brains as food, but properly prepared, they are very delicate and will be liked when once the prejudice is overcome. They are similar to sweetbreads, and when prepared in the same way are very good served with scrambled eggs. The Vinaigrette Sauce gives a very acceptable flavor, especially pleasing at this season.

**VINAIGRETTE SAUCE.**—Mix three table-spoonfuls oil, one table-spoonful vinegar, one teaspoonful each of grated onion, chopped parsley and capers, and one-fourth teaspoonful each of salt and pepper. Serve with the calf's brains.

**JELLIED CHICKEN.**—Boil a four-pound chicken, with a small onion, a bit of mace and one-third teaspoonful celery salt, until tender. Add to the stock (of which there should be one quart) one box gelatine soaked in one-half cup cold water, one table-spoonful salt, one-third teaspoonful pepper and from one to one-half cupful wine.

Cover the bottom of the mould to the depth of half an inch with the stock and let it get firm, then decorate in any way preferred. Put the remainder of the stock and the chicken meat, which has been cut in dice, into the mould in layers, letting the stock stiffen before adding the next layer of chicken. Set the mould in ice water to facilitate matters. Thin parings of radishes, the yolk and whites of hard-boiled eggs cut in fancy shapes, parsley, angelica, truffles and similar decorations may be used, making designs as preferred. Serve on a bed of lettuce leaves. The wine may be omitted from the jelly, using instead more stock and other flavorings, such as lemon juice. The jellied chicken as served at the school was very handsome.

**CHEESE SANDWICHES.**—Cut a slice of bread of medium thickness into oblong shape and with a sharp knife remove sufficient of the centre to make a very shallow box. Fit into each slice of bread a thin slice of American factory cheese, season with salt and paprika or red pepper, cover with a thin slice of bread and brush over the whole surface

Treat your horse well and he will treat you well. Give him a bed of German Peat Moss. C. B. Barrett, 45 Market Street, Boston, Mass.

with the white of an egg which serves to bind it together and keep the bread from absorbing too much fat. Brown quickly in hot fat and serve immediately. In the cooking, the cheese becomes soft and creamy and if allowed to stand, will be very unsatisfactory, the principle being the same as that of a rare-bit. A bread fine grained in texture and without shortening is best suited for these, either one made with milk and water, or of water alone. The sandwiches may be toasted instead of fried if more convenient, and are excellent. Served on lettuce leaves with cold meat, they make quite a substantial lunch.

A variation of this recipe recommended at the lesson was sandwiches made of thin slices of rye bread with a filling of chopped nuts mixed with grated cheese, and toasted. These are especially good to serve with a lettuce salad.

**ITALIAN SHERBET.**—Boil one quart water and one pint sugar fifteen minutes. Add one-half cupful lemon juice, one and one-half cupfuls each of orange juice and grape-fruit juice, and one-fourth cupful wine. Strain and freeze, turning the crank slowly. Serve in the grape fruit skins, preferably as soon as frozen. The pulp and juice of the orange and grape fruit may be removed with a spoon and strained through cheese cloth. If a blood orange is used, a very pretty color is given. The flavor is very pleasant. Omit the wine, if preferred.

The last lesson of the spring series will be given next Wednesday morning, April 20, at the rooms of the Cooking School, 372 Boylston St., beginning at ten o'clock. Crown of Lamb with Peas, Halibut and Tomato Sauce, Chicken and Tongue with Bechamel Sauce, Grape Fruit Salad, Pate de Foie Gras in Aspic and Strawberry Short Cake will be prepared and served. Single admission, fifty cents.

### FARMERS' MEETING.

(Continued from Second Page.)

Our friend has certainly pictured to us an ideal home for the farmer, in glowing brilliant colors. He has given to us an object lesson of a very high character. It has been said often times that we should aim high, even if we do not reach that high point. By aiming high, we shall certainly get higher than if we aimed lower. So he has presented to us an ideal, beautiful farmer's home. Of course, no one of us can begin to cover our grounds with all the great variety that he has named, but there is not one but can do something towards beautifying our homes and making them in some degree of the character that he has represented to us today.

He has suggested many points of practical value to the farmer, the leading one of which to my mind is the use of chemicals, the raw materials rather than the mixed fertilizers put upon the market. He has not said what I know to be true, that farmers may save 33 per cent by buying and using the raw material, and mixing it themselves. He has, however, given us many formulas. I know that he has gone through many very correctly, and doubtless, as he says, his experience may be practically used. He has presented a great variety of topics and many suggestions for discussion, and that discussion is now open to you.

Mr. Thatcher: I would like to ask one question in regard to the use of fertilizers. Is the formula he presented sufficient for land that is not manured otherwise, and also for raising potatoes? Is the formula as given sufficient?

Mr. Stevens: I would say that I always like to test things. The crop of potatoes I grew last year, which were as smooth as a hen's egg, and of excellent quality, was grown upon an old pasture. To my knowledge, it has not been cultivated for ten or fifteen years.

With the application of that fertilizer, I grew as fine a crop of potatoes as I ever did. The question the gentleman raises is a practical one. I also believe in a cover crop. Don't leave it bare any more than you would the cuticle from off your flesh. If mother earth is deficient from any cause, we must supply the deficiency before we can commence to grow plants.

Mr. Harrison: I would like to ask the gentleman if he does not think the soil has something to do with it as well as the manure. We know, in general practice, that new land is preferable. I have experienced that in many instances. Last year I grew some of the best radishes I have seen on new land with ashes.

Mr. Frost: I would like to ask the essayist if it is a possible thing to raise poor potatoes on high soil and land? Is it possible on such land as that to grow poor potatoes? I claim that you cannot help getting good potatoes; but you cannot raise good potatoes on a low field that has been cultivated twenty years. Will you answer that?

Mr. Stevens: True. To that I will say a hearty Methodist amen! Mr. Waite: These meetings have always been open to ladies, and a special invitation is always given for them to be present. We have been usually favored by their presence and they have taken the floor and given us something from their own experience. We have some ladies present with us today, and one will speak a few words, Mrs. McBride.

Mrs. McBride: Mr. Chairman, I thank you very much for the opportu-

ity of saying just a word. We believe that people must be properly cared for as well as plants. Now, next fall I have at the Mechanics' Fair the Household and Art Department under my supervision. We are going to use fruits and vegetables; we shall show that fruit, properly served with whipped cream, is really much more healthy than the pie crust which takes a great deal of time to make. I want to ask those who are raising vegetables, if they would be kind enough to confer with me in the summer as to what kinds of vegetables they would like to have us cook. (I live at Arlington Heights.) We should like very much indeed to have those who are raising several kinds of vegetables to send specimens in, and let us try the very best of cooking, and see what we can do with the vegetables. If each man who is raising vegetables will let us have his address we can then show what the market gardeners of Massachusetts are doing. It would be a very great pleasure if the gentlemen would take some action as to what they would like to do. We would like to have all kinds of vegetables in their season, and serve and cook them in the best way our teachers can. We intend to do more in the way of forcing, if necessary, fruits upon the young people, and we want to show them how fruits can best be served, and in how great a variety of ways. I should be very happy for any suggestions.

Mr. Ware: Our Agricultural Colleges and Experiment Stations by their study of the laws of chemistry, have given to the farmers what they call balanced rations, to feed their animals, and also their crops. By that investigation farmers are enabled to produce crops, I am very sure, at one-half the cost that they formerly did. I am also very sure that by the feeding of balanced rations to our dairy stock, dairymen are enabled to supply the market with dairy products of the very best quality, at one-half the cost all through the investigation of our experiment stations, which have led to the understanding and applying of the laws of chemistry.

Now, I am very glad to learn that our ladies have caught the idea, and are endeavoring to present to our families the method and way of feeding our selves with balanced rations, so that we may be able to provide food for our families with material that is equally nutritious and by improved methods of cooking vegetables and fruits, such as these ladies are experimenting upon, giving us very many dishes at one-half the cost, of better quality and more nutritious than the more expensive kinds formerly in use. God bless them. They are doing the work for our families that scientists have done for farmers! It might seem strange that the idea of providing in the best proportion the nutrition for families should not have been first adopted, but I believe it was not. But the ladies have now caught the idea from the scientists as it has been presented at our Agricultural Colleges and Experiment Stations, and are developing similar principles for the use of families.

Mrs. McBride: All our work is done under the leadership of Mr. True of the Agricultural Department. We are indebted as you are, to the Agricultural Department of the United States for the assistance we have received in the method of cooking our food. We trust we shall be a part of the Experiment Station work. We hope to see you all next fall and have your suggestions. I should like to ask a question about the potatoes, which is one of the things I never could make grow. I have tried it, and am very anxious to have a large bed. Mr. Stevens: The trouble is that nearly all the planters cover the seed too deep. It is a very tender flower. Take some fine sand and spread on top of your land after you have prepared your border, sow the seed, but do not cover, except with a newspaper.

Mr. Warren: I should like to ask if that method will do for all kinds of seed that are hard to grow.

Mr. Stevens: Nearly all. We just cover with a mixture of sand, then cover with papers. Cover your bed with fine sand, sow your seed, and then cover with newspaper.

Mr. Frost: I believe the pur-lane, in our garden, belongs to the same family. Mr. Stevens: Own cousin.

Mr. Frost: We never have a bit of trouble with the purslane coming up. It is never covered.

Mr. Hadwen: Speaking of portulacas and purslane, I presume my friend never allows his purslane to go to seed, consequently it is no trouble, and portulaca is just the same. I have a tulip bed, and after the tulips are gone, the portulacas come in. It is a perennial. It sows itself I don't know that I have ever seen it elsewhere in my grounds. Still I have it every year in my tulip bed. The portulaca persists in occupying the ground after the tulip.

Mr. Ware: The surface you cultivate in some way, do you not?

Mr. Hadwen: Not very much. We dress in the autumn, but the portulacas are as persistent as the purslane itself.

Mr. Ware: That is easily explained. You know a single bed of portulacas would perhaps have millions of seeds so

the ground is filled with it sooner or later, and some of the seeds will be in the right position to germinate. Seeds germinate only when they are near enough to the surface to get the effect of the sun and moisture. They retain their life for a long period. Sow portulacas, if you please, at the surface, then they will germinate and grow.

Mr. Frost: Mr. Chairman, you can't support that fact at all. You say, seeds won't germinate until they are brought sufficiently near to the surface. Now, then, you may have a piece of land as smooth as this floor, and purslane will come up 400, or 500 to the square inch. You destroy them with a little light hoe, and if the weather is dry and a good copious shower follows, there are 400 to 500 to the inch again! So you can't prove that fact, Mr. Chairman.

Mr. Ware: You have proved it yourself.

Mr. Frost: You didn't hoe the ground over one-quarter of an inch deep, but you will have the same crop up again, just as thick as it was before. You can't tell why it is that every seed in the ground does not germinate. It is a mystery to me and every other farmer why weeds will keep in the ground, and always be so good, with so little trouble. It is a troublesome mystery, too.

Now, I know something about strawberries. The essayist left out the Marshall, and he has brought in the Sample berry that never was tried to the satisfaction of anybody; he has also brought in the Brandywine, and the Clyde, which have been condemned by every individual in Horticultural Hall. Now, I will condemn the three of them!

Mr. Ware: Have you had any experience with the Sample? Is it true that it took the first premium?

Mr. Frost: I will tell you about it. The Sample has been put upon the market every successive year. It is now in the hands of Mr. Pratt of Reading. He exhibited them. The board was covered with white velvet, with little silver cut crosswise and the stems of the berry stuck in, giving it a very pretty effect. It was examined, sir, and condemned as a soft berry. They ordered it for table, then set the Sample off the table because he was advertising this particular berry.

Mr. Ware: Because it was an advertisement?

Mr. Frost: Yes, it was an advertisement. I saw the berry, and the Clyde, also.

Mr. Ware: Then it is not true that they took the first premium last year?

Mr. Warren: It wasn't last year, it was year before last they gave it the first premium, as a new berry that was never before exhibited.

Mr. Frost has spoken about the Clyde as being worthless. It is one thing to have a thing which is valuable as dollars and cents, and another as valuable for quality. I have never got hold of a berry that I was as well satisfied with. It is not the best quality, at it is better than the average. Taking all points in consideration, I consider it one of the best berries.

Mr. Stevens: Our friend, Mr. Frost, has said I did not specify or recommend the Marshall. It was for this reason. I can show him nineteen out of twenty of the growers for commercial crops, who will condemn the Marshall strawberry, and I know of no spot where they will flourish better than on Mr. Frost's farm.

One thing against the Marshall is, while a grand berry in size and quality, the foliage mildews and blights and rusts in culture badly. It will bear and have extra large berries that make a great show upon the table, and are fine to eat; but for the average person, I try to give something that every man, woman and child can grow that is best for the most of them. Now, in these varieties, the Sample I have eaten for three or four years and have never seen its equal for a berry. If it will do over the country as well as it has done in its native soil, we have always a perfection in a berry, in color, shape and quality. Mind you, I recommend it as one of the promising kinds.

Mr. Cole: The essayist, in telling us about making a lawn, recommended the sowing of seed eighteen inches deep, and raking it in, and also to water the land. He also condemned our using cold water on lawns. Now, how are we farmers to irrigate our lawns and gardens with warm water? I would like to have him explain it to us.

Mr. Stevens: If Brother Cole had followed me, he would have noticed this one thing. Do not give too much water to your young lawn. I said they are drowned to death, and the fertility is washed out of lawns. Make your soil deep and uniform, fertilize it well. Sow the kind I have recommended. I will.

Mr. Warren: It is death to all of the plants. They were eating the strawberry plants and I kept applying salt. It killed the strawberry plants entirely. But it did not kill the white grub!

Mr. Ware: The question has been asked as to salt as a fertilizer? I have put that question to myself, and to the agricultural chemists of the Experiment Station. They say, no, salt is not a plant food, is not an element of fertilization. But it is a fact that such crops

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have tried many kinds. It was my good fortune to plant and sow the old Granary Burying Ground with seed, also in Franklin Park. I don't know any greener or better lawns anywhere around. I see so many beautiful lawns spoiled every year by continual drenching.

Mr. Hadwen: There is one point in relation to watering lawns which has not been touched upon. It is well known that frequent watering of all plants has a tendency to bring the roots to the surface, and there is the difficulty. If the plants receive no water, the tendency to the roots will be downward in quest of moisture, but if they have too much watering, then the roots will come to the surface. So, I think, it is important to guard against too frequent watering of, in fact, any plants. We know the plants sometimes wilt, but the tendency is for the roots to go downward, where they will receive the natural moisture of the soil.

Mr. Harrison: I would like to ask the essayist if he finds any difficulty in using the lawn mower on the dirt crop of grass from four to six inches in height?

Mr. Stevens: That depends on what lawn mower you use. With the Philadelphia lawn mower I have cut grass as smooth as the floor, while I have seen a heavy lawn mower run over a lawn that would injure the little tender roots very much. I want the surface covered well before it is cut the first time, and the grass to be six inches tall at least.

Mr. Harrison: Have you noticed that it is quite customary to put large quantities of cow and stable manure on lawns in the fall and spring? Now, I have noticed a large crop of weeds in a few years afterward from doing this. I know some lawns have been entirely spoiled by this.

Mr. Stevens: I think this is one thing which people ought to avoid as much as possible. The grass is killed out by being smothered out. I spoke of this, and would never recommend putting any animal dressing upon our lawns, but in the fall, in October, give a good dressing of wood ashes, and in the spring a dressing of nitrate of soda.

Before this meeting breaks up, and as this is the closing one of the series of meetings this season, I move you that a vote of thanks be extended to Mr. Linus Darling for his generosity in affording us the privileges he has in carrying on these meetings, furnishing this hall, and printing full records of the meetings.

Mr. Ware: It is true that Mr. Darling has manifested a very generous spirit by providing meetings of the character that we have had this winter, with a comfortable hall, in every way convenient and free to all who chance to come. Furthermore, the lectures that we have had been of very great value; the one today is a sample, one that we shall be glad to refer to from time to time. He has put them all in print, and I think we are indebted to him very much for the courtesy and generosity with which these meetings have been carried on.

You have heard the motion, any further remarks? If not, those who are in favor of the motion, please manifest by rising. (Every one rises.) Those opposed. (None.) It is a unanimous vote.

Mr. Warren: One article has been mentioned as a fertilizer, which I have never been fully convinced about, which is salt. In what way does salt act as a fertilizer?

Mr. Stevens: I recommend that only in the preparation of the land for our lawns. Why? Many of you two years ago and years back, lost a good deal by the June bug. The June bug destroyed a great deal of grass. I have never found anything to go back on the land where you used salt.

Mr. Ware: How much to the acre?

Mr. Stevens: I put on two bushels of salt to one bushel of plaster. Salt is retentive of moisture, and by putting it on the land it is death to most of those young grubs.

Mr. Warren: It is death to all of the plants. They were eating the strawberry plants and I kept applying salt. It killed the strawberry plants entirely. But it did not kill the white grub!

Mr. Ware: The question has been asked as to salt as a fertilizer? I have put that question to myself, and to the agricultural chemists of the Experiment Station. They say, no, salt is not a plant food, is not an element of fertilization. But it is a fact that such crops

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carrots, cabbage, etc., will show a greater crop with salt than without it. So I feel that we can claim with some things that it has a beneficial effect. Not that salt is a plant food but it has a chemical action upon ingredients in the soil, having a tendency to liberate them.

Mr. Chase: Mr. Chairman, I think I should not do my duty unless I make a motion, which is, that for the eloquent, practical and exceedingly valuable lecture we have just listened to, we express cordial thanks.

Mr. Ware: You heard Mr. Chase's motion. Have you any remarks upon it? Those in favor of it, please manifest it by raising the hand. (All hands were raised.) Those opposed. (None.) It is a unanimous vote.

Mr. Harrison: I am of the opinion that there is something beneficial in salt. They say they raise better asparagus with it. I have used it some with good effect. I am of the opinion that there is something in salt, more or less, where seaweed is used in large quantities. Seaweed must contain a great deal of salt. I cannot see why chemists should say it is not beneficial when used on the ground.

Mr. Ware: What we call seaweed, or sea manure, which is kelp and sea moss, that the ladies press so beautifully, are very rich fertilizers, and we grow some of our finest crops with them; they do remarkably well with what we call sea manure, particularly meadow muck. I remember mixing sea manure with meadow muck, and of producing one of the finest crops of cabbages I ever grew.

As the hour was late Mr. Ware announced that unless there was something important to be discussed, he would declare the meeting adjourned.

He also stated this to be the closing meeting of the season, and added that they had been very valuable indeed to him, as he felt sure they had been to all those who attended.

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